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NOTICE.

ON and after the 1st of July, Notices of Births, Marriages and Deaths will be charged \$1 each insertion.

Such Notices cannot be inserted in this journal unless endorsed with the name and address of the person by whom they are sent.

Yokohama, 25th June, 1874.

Notes of the Week.

A telegram was received this morning announcing that the evacuation of Formosa by the Japanese troops was completed on the 3rd instant, salutes were exchanged and a Chinese camp was established. The accounts of foreigners who have been with the Japanese during the time they held possession of the Island seem to agree that the persons and property of the peaceable natives have been respected, outrages of every kind were rare, if indeed any occurred, while supplies drawn from the country have been paid for with punctuality and exactness. These are unusual features in Asiatic warfare.

It is not unnatural that the expenses of the Formosa Expedition should have formed the subject of much discussion and speculation, nor is it possible that the actual total can be arrived at until the troops have returned and the Island has been finally evacuated. Meanwhile, however, it is safe to say that the estimate of ten and a-half millions of dollars, at which they were recently assessed by the *Japan Herald*, is altogether beyond the mark. Judging *à priori*, it is wholly inconceivable that the transport of at most six thousand men to and from the Island, their maintenance there during seven months, and such expenditure as is known to have been incurred for munitions of war, should amount to any sum which would account for even a fair proportion of this enormous total. The cost of the transports is sufficiently well known to have been about one million and a-half of dollars—a fact which any one may verify for himself from the sales of steamers made to the Government by various mercantile firms, and accurately reported as made. The expenses of maintaining the troops in Formosa may easily have been \$200,000 a month, which, for seven months, would amount, say, to a million and a-half of dollars. Add a similar sum for equipment and munitions of war, and another million of dollars for contingent expenses and the Embassy to Peking, and we have a grand total of five and a-half millions of dollars, an estimate on which those best informed are agreed, within a very small variation. Against this must be set the value of the transports, which, on the whole, have been well bought, and of the munitions of war—say, together, two millions and a-half of dollars. China, also, it must not be forgotten, pays seven hundred thousand dollars.

We cannot, of course, say to what extent the next Financial Statement will be affected by these figures. But it may be remembered that a very large provision, under the head of

General Contingent Fund, and amounting to \$4,700,000, was made in the last Budget, so that, assuming our figures to be moderately correct, the proportions of revenue to expenditure, as represented in it, should not be materially altered; and we trust we may find ourselves correct in these views.

What a curious thought it is that a creature so dependent as man is on a mutton-chop should be the lord of the world! Yet it is nothing less than this. Lord of the world he certainly is; as certainly is he dependent on his chop. He is a compound of physical, intellectual, moral and emotional forces, all which are nothing but forms of converted chops. Mr. Grove, or, as we are now pleased to see him, Mr. Justice Grove, has shown that light, heat, electricity, chemical action and so forth, are mere correlated forms of one primitive force; and, in like manner, our thoughts and feelings, our loves and hates, our friendships, our socialities, our passions and speculations, are but manifestations of that *primum mobile*, our food, which we may call typically, and for the moment, the mutton-chop. It is not a flattering reflection. It would be far more pleasant to think that the *Principia* or the *Divina Comedia* were the expressions of an inspiration proceeding from some altogether higher sources, and rather vouchsafed to us through human channels of special virtue, than the productions and outcome of a source so vulgar as that to which we have traced them. It is not agreeable to think that our most disinterested feelings, such feeble intellectualities as we may be capable of, our best affections, and most amiable emotions, are resolvable into so much carbon and oxygen. The saying *Dis moi ce que tu manges, je te dirai ce que tu es*, was deeper than was imagined by its author. He, indeed, would only have inferred the tastes and sensibilities of the eater from the record of his food. But, thanks to the progress of science, we can go further, translate a man back into his food, and declare that all his most prided possessions are mere forms of the ultimate chop—ultimate, that is, from our present point of view. The germs even of our social instincts lie in our food, and the very act of uniting to enjoy it is one of the manifestations alike of our power over it, and its power over us. It is quite clear, therefore, that this philosophy at once explains and justifies that tendency which all civilized and uncivilized men have to meet and dine together.

But apart from this purely chemical and biological view of the question, we may surely regard it in other lights. The dinner is the *blanda conciliatrix* of the world, the machinery by which intellectual enjoyment is thrown over animal necessity, the magnet which brings and the cement which binds society together. It is one of the most delightful manifestations of the social instinct, and the aptitude for it may almost be characterized as the test of cultivation, alike in individuals and nations. That estimate of life which depreciates it, or that temper which its blandishments fail to reach and conciliate, seems to us defective in essential humanity, and when we hear it disparaged we infer that the capacities of the object—or are either those of the boor or the prig.

From these points of view, the sacrifice offered to the pious memory of St. Andrew on Monday last was thoroughly well justified. Thanks to the hospitable instincts of the Committee, invitations were amply extended to Englishmen and Irishmen, and if “a three fold cord is not easily broken” there was aptness in bringing together those who, under the proud name of Britons, regard their union as essential to the welfare, power, and happiness of the United Kingdom to which

they all belong. Nor should we omit to say that the hearty welcome bidden them by the Chairman warmed the feeling and strengthened the tie of brotherhood, and promoted that sentiment of good fellowship which, important as it is at home, is far more important at this distance from our native land.

WITH the question of the relations of Japan to Corea, shewn by a translation elsewhere to be again cropping up, comes that of Representative Institutions, which seems to have fallen into abeyance of late. The project for assembling the *Chihayi*, formed six or eight months ago, but abandoned—perhaps wisely, certainly conveniently—during the continuance of the dispute with China, never seems to have met with much favour from the body of people, and its constitution gave it no claim whatever to the title of a popular assembly. The *Sa-in*, too, if indeed it possesses more than a nominal existence, is utterly powerless as a legislative and meaningless as a representative body.

The Formosa question with the dangers into which it led the nation, has aroused some to the conviction that, without more decided evidence of the expression of the national will and opinion than supported the Government eight months ago, steps of such momentous importance should not be undertaken at the sole instance of the Cabinet.

Any attentive reader of our translations from the native Press must have observed that there are often aphorisms of considerable political insight and value imbedded in them, and though these seem rather to represent abstract conclusions than the experiences of practical politicians, and are probably rather derived from Chinese authors than the natural deposit of the mind of the writers, still, they have much life in them, and only require to be disseminated by an active and intelligent Press to become foundations of further thought and incentives to active political life—a great desideratum in a country, where, as recent events have proved, there is a large and even wealthy class which looked upon the dispute with China as a mere affair of the Government with which they were entirely unconnected.

A strange and amusing little quarrel seems to be raging as to the share which the Foreign Attachés of the recent Japanese Embassy to Peking had in bringing about the peaceful solution of the late quarrel. So far as we can follow it, the action of Mr. Wade is virtually ignored, and the pacification of the angry disputants is referred to Mr. Le Gendre, or to some one else, known or unknown. This hardly seems to us fair. "Honour to whom honour" is a maxim of Western courtesy, and they are to blame who disregard its obligations. But the partisans of Mr. Le Gendre claim too much. The honour due and ungrudgingly paid to him is that of having got the Japanese into the trouble. Their extrication from it was due to agencies of a widely different order.

THE *Nisshin Shinjisshi* says that the War Department have adopted a scheme of Coast fortification, and that this will involve the removal of the English and French troops. The scheme may be admirable, but the subsequent logic is difficult to follow. We shall, however, be pleased when the condition of this country is such that the presence of foreign troops here is no longer considered necessary.

THE party of French astronomers has, we learn, sailed from Kobe for Shimonoseki and Nagasaki, at which two points they purpose making transit observations.

SOME Japanese sailors lately wrecked on the Corean Coast having been saved by a Corean fishing boat, money and clothes were given them, and they were otherwise treated in a friendly manner and then sent back to the Japanese settlement in that country.

THE staff of officials of the Assembly of Local Authorities has been broken up, and the idea of holding a parliament of them abandoned.

As we go to press a fire is announced as having broken at No. 183, but extinguished with small damage.

(From the *Japan Mail Daily Advertiser*.)

Dr. David Murray, the adviser to the Education Department, accompanied by Mr. Hatakeyama, the Director of the Imperial College at Yedo, have been inspecting the College and chief schools of Osaka. They are on their way to Nagasaki, to join the United States Transit of Venus party.—*Hiogo News*.

A fire, which was fortunately promptly overcome, broke out on the night of the 2nd inst. at about 7 o'clock at No. 116 on the Creek. The engines of the Volunteer and Private Fire Companies were promptly on the spot, and succeeded in stopping the progress of the flames though not before one of the buildings had been destroyed. The lot was occupied by Mr. W. H. Smith, and the building appears to have been employed for purposes of storage. The fire is said to have been occasioned by the accidental explosion of a kerosene lamp. The night was fortunately unusually calm or there is much reason to fear that the sparks carried across the Creek might have ignited the houses at Homura.

THE remains of the late Monsieur Cazeneuve were committed to the grave on the 2nd instant, the funeral being largely attended by the friends of the deceased including several of the Foreign Ministers and Officers of the French and English Services. A detachment of French Marines accompanied the funeral cortège to the cemetery.

A parallel to the Briggs tragedy is reported to have occurred on the Kobe and Osaka Railway. The victim in this case was a first-class Japanese passenger, known to have a sum of 300 yen in his possession. The murder, which was not discovered until the train arrived at Osaka (the murderer and his victim being the sole occupants of the carriage), appears to have been effected by strangulation. The murderer alighted at a midway station, and though actively sought for by the police, has not yet been discovered.

THE following translation of the address presented to Okubo by the Japanese merchants of Yokohama is published by the *Japan Herald*:

"We respectfully welcome the happy arrival of your Excellency. Since you left for Peking, charged by the Emperor with an important mission, the people of Japan awaited with anxiety the decision which should be arrived at. The despatch of the 8th instant came to dissipate all our inquietudes. Peace is signed. This is a great happiness for Japan, and we are overcome with joy at it. The happy result of this business is owing to the great wisdom of H. M. the Emperor, and to the patriotic skill of your Excellency. It is a great blessing for two nations to have thus escaped the scourge of war, and at the same time a great honour to the Japanese people. We therefore respectfully request your Excellency to accept our sincere congratulations."

A second address, from the Yamanachi Ken, was also presented, and Okubo replied in the following manner:

"Since our Emperor again took possession of his great authority, the expeditions to the North and South have allayed the insurrections, and the entire country is now happy and tranquil under the government of His Majesty. The peace which has just been signed with China, assures the happiness of two nations. It is to the patriotism of the entire people, from His Majesty down to the lowest of his subjects, that this happy result is due. Nothing could have led to peace if it had not been patriotism. I am happy on my part to accept the congratulations which you offer me, and I cannot find words adequate to express my thanks to you. I trust that the tranquillity of the Empire is now re-established for some long time to come, and that the prosperity of this port is henceforth assured."

THE mails for the *Vasco de Gama* will be made up to-night. She will be despatched at daylight to-morrow morning.

A Japanese cattle-dealer sued Messrs. Woodruff & Co. yesterday in H. B. M. Provincial Court for \$201, alleged to be due for cattle purchased by them. It was shown that \$125 of this had been received by the plaintiff's son. The balance was paid into Court by the defendants.

Mr. BRYAN, Superintendent of Foreign Mails, left by the P. M. steamer yesterday for the Southern ports.

Mr. Mayesima, Postmaster-General, was a passenger by the same steamer.

A Japanese newspaper has the following: It was reported that in the year 1872 a planet would come into collision with the earth. People were a good deal frightened, but the report proved untrue. In like manner they are at this moment a good deal excited by the intelligence that Kinsui, the Golden Star (Venus) will pass between the sun and the earth on the 9th instant. This has occasioned a rare crop of blunders. Some, for instance, hoped to be gratified with the view of a star formed of gold; while a party of pilgrims on the Yadowa mountains were apprehensive lest Kinsui should strike the sun and by falling on their homes at Nagaoka and Niigata turn the district into so much mud! It seems that a Niigata tradesman, working at his business in a neighbouring province, heard of the forthcoming catastrophe, and was hurrying off to remove his family and household goods before the evil day came. But meeting a friend his apprehensions were removed. There was little fear of Kinsui falling he was told. The worst of it was that the Ohno golden star had wandered from its orbit, had struck against the sun (in the national flag), and with such consequences as the whole nation must feel.

We append the names of the prize-winners at the shooting match of the Swiss Rifle Association on the 29th instant:—

CIBLE PATRIE.

1.—Silver Cup	...	...	...	...	Mr. Lescesse.
2.—Crystal Centre Piece	...	...	...	...	Senn.
3.—Russian Leather Calender (musical)	...	...	...	...	Ulbrich.
4.—Travelling Dressing case	...	...	...	...	Ziegler.
5.—Set of Gold Studs	...	...	...	...	Brennwald.
6.—Gold Pen cil case	...	...	...	...	Perregaux.
7.—Penknife	...	...	...	...	Vivanti.
8.—Ridding Whid	...	...	...	...	Bauder.
9.—Ivory Sleeve Buttons	...	...	...	...	Schimme.
10.—"Une Surprise"	...	...	...	...	Henni.

CIBLE À POINTS.

1.—Silver Cup	...	...	...	Mr. Vivanti	44 points.
2.—Silver Candlestick	...	...	...	Ulbrich	36 "
3.—Crystal Tankard	...	...	...	Brennwald	34 "
4.—Gold Pencil Case	...	...	...	Favre-Brandt	34 "
5.—Penknife	...	...	...	Schimme	29 "

CIBLES TÉRANATES:

1.—Silver Cup	...	...	...	Mr Favre Brandt	47 points.
2.—Silver Sugar Bowl and Tonge	...	...	...	Vivanti	39 "
3.—Photographic Album (musical)	...	...	...	Schimme	32 "
4.—Travelling Writing Case	...	...	...	Ziegler	27 "
5.—Riding Whip	...	...	...	Brennwald	17 "
6.—Ivory Sleeve-Buttons	...	...	...	Lescesse	17 "

SHIPPERS OF SILK.

Per P. & O. steamer *Massilia*, despatched 1st December.

England. France:

Sundries... 48 bales... 10 bales.

Total 58 bales.

IMPERIAL GOVERNMENT RAILWAYS.

2nd December, 1874.

Statement of Traffic Receipts for the week ending Sunday, 29th November, 1874.

Passengers.....	32,258.	Amount.....	\$7,152.28
Goods and Parcels.....			609.86

Total..... \$7,762.14

Average per mile per week \$431.23.

Miles Open 18.

Corresponding week in 1873.

Passengers.....	24,334.	Amount.....	\$7,060.13
Goods and Parcels			487.03

Total \$7,547.16

SHANGHAI:

The P. & O. Company's steamer *Geelong*, Charles Fraser Commander, reports that on the 19th inst. in Latitude 24.39 North and Longitude 118.44 $\frac{1}{2}$ East she lowered a boat under the command of Mr. Coleman the 2nd officer, with Mr. Coates the pilot, and rescued eighteen men, the crew of a junk which was in a sinking state and which made signals of distress. The junk was from Foochow to Amoy. The men were brought on to Shanghai.—*Celestial Empire*.

The following from the *North China Daily News* refers to the Foreign Loan:

From time to time it has been reported that the Chinese Government, through its Provincial officers, was likely to enter the money market, to raise an amount variously stated, in order to have the "sinews of war" at command, in view of the impending struggle over the Formosa difficulty. And although that matter has been adjusted, it would appear that the intention which gave rise to former rumours has not been abandoned, but on the contrary carried out as a *fait accompli*. The monetary character of the settlement with Japan; the necessity for funds to meet the fulfilment of numerous contracts entered into for the supply of arms and war material; and, not least probably, the desire to be better prepared next time, may all have urged this step on the Chinese. At any rate the Imperial authorities have determined to add a national debt to the dignities of the nation, and we understand that their bonds will shortly be offered to investors by the Hongkong and Shanghai Banking Corporation. The amount contracted for is small—about two million taels. We hear that the loan is secured by hypothecation of portions of the Customs revenues of Canton, Foochow, Amoy, Ningpo, Chinkiang, Kiukiang, Hankow, Shanghai, Newchwang, Chefoo, and Tientsin,—in fact all the ports at which foreigners are employed as collectors of the revenue; and that our popular local Bank intends to place the amount in the China market, in the form of £100 bonds, issued at £95, bearing interest at 8 per cent per annum. We hope the transaction will be beneficial both to the borrowers and lenders.

The Peking Gazettes we publish to-day show that the authorities at the capital, not excepting the Emperor, are still much exercised over the case of Chêng-luh, the Commander-in-chief at Crumtsi, who was sentenced to death for ordering troops against a village a false report of the condition of which had apparently reached him, the result being that 200 unoffending people were killed.

We hear that the first Tls. 100,000 of the sum which the Chinese have agreed to pay the Japanese has been handed over by the Haikwan (Customs) Bank here. The Shanghai Customs treasury has to furnish another Tls. 100,000 of the indemnity. The Customs funds seem to be always ready for the dredging of bars political, whatever they may be for bars physical.—*N.-C. Daily News*.

In accordance with instructions from the Trustees to the estate of Messrs. Dent & Co., the "Pao-shan" property at Ningpo was put up to auction yesterday, by Mr. F. A. Groom. The property consisted of 10 mu of ground, a two-storied dwelling house, two large godowns, offices, stabling, &c. walled in to a height of 16 feet. The river frontage extends to 195 feet. There was a languid competition, and the property was knocked out at Tls. 5,600.—*N.-C. Daily News*.

MACAO has hardly recovered from the disasters of the recent typhoon when another calamity overtakes her. A destructive fire occurred on the night of the 20th inst., in the most thriving part of the Chinese portion of the City. It originated in a shop which dealt in dried oysters and other shell fish; and spread with great rapidity, destroying some twenty houses, among which are some of the largest piece goods shops, particularly the Sam Choy, which had been doing a very extensive business.—*China Mail*.

SIGNS OF THE TIMES.

IT is sometimes doubted whether there be any real vitality in the movement among the Japanese which has excited, and is still exciting, so much curiosity and interest in the world. There have been, as we pointed out last week, some dark hours during which sober men mistrusted it, and this with sufficient reason. Especially has the English mind—little given to confound showy externals with solid acquirements—felt this mistrust. There was no unfriendliness in the misgiving, though it often found expression in the rough manner characteristic of those whose sturdy nature considers politeness ill purchased at the expense of truth. It was the feeling of men who have won their own national triumphs slowly by making good every yard of ground over which they advanced, and whose present position gives them an ample right to form an authoritative, if not a final, judgment upon the efforts of other nations. That wonderful endowment of common sense which, like an instinct, stands the English people in such excellent stead, and preserves it from errors into which nations of the same rank have so often been seen to fall, was not easily won over to a movement which had at least as many falls in it as steps in advance. In our habitual mistrust of abstract principles, or abstractions generally, we smiled with some disdain at the perpetual repetition of the words ‘civilization’ and ‘enlightenment’ which are so common in the mouths of the Japanese, and which, whatever they may actually mean in the native mind, are certainly identified with an order of things widely different from that represented by the old traditions of the nation. It was feared—and there was much ground for the alarm—that the Japanese were like men who had abandoned walking on the solid earth and taken to a system of ballooning from which innumerable disasters might safely be predicted. A humorous cartoon once appeared in *Punch* illustrative of the probable fate of those who were eating the aerated bread, then in fashion, and in which they were depicted as floating about in a room, their heads in embarrassing contact with the ceiling. The lighter gases of civilization were so abundant, and had been absorbed here so readily and to such an extent by the younger generation, that it was in some such danger as that caricatured by the London satirists.

But thanks to a vigorous resort to the practice of acupuncture, partly in mere humour, partly in malice or horseplay, and partly because it was perhaps the best surgery under all the circumstances, there is certainly more disposition now visible than formerly among the Japanese to take serious views of questions of importance, certain notable instances of recent occurrence to the contrary notwithstanding. Among the most hopeful signs of solid progress at this moment, and among the best auguries for the future, is the activity of the Japanese Press, and the free range permitted to it by the Government. It is possible that we may regard this with some partiality, hardly conceivable in those who think that, in spite of all the mischief for which it is assuredly answerable, the Press is still one of the most useful and valuable of all the modern moral forces. But we can hardly be far wrong in our views when we see the growth week by week of the native periodical Press, and its employment in the discussion of serious questions with ever increasing earnestness and ability. If reading makes full men and writing exact men—axioms the truth of which depends greatly on what men read and write—there is fair hope that a generation of fuller and more exact men is rising up in this country who will soon be more or less directly influencing its

destinies. The very fact that the newspaper has sprung into such active existence in this country is in itself sufficiently remarkable, and those who have followed with any attention the translations which it has been our good fortune to be enabled to place before our readers during the past few years, must allow that the evidence they afford of a vigorous mind at work in the nation is most satisfactory and gratifying. Such inevitable drawbacks as attend the existence of a moderately free Press in this country, to some of which we shortly referred last week, are surely abundantly compensated by the intellectual activity which that Press at once evinces, creates, and increases. It is observable, too, that the views incidentally expressed by native writers on the duties of the Press show that they regard these as of grave weight and importance. In an essay the translation of which we published on the 17th of October last, the writer, referring to the misconceptions which exist among the people on important questions, says,

In foreign countries, when matters of such importance arise, they are minutely discussed by the newspapers, which explain to the people where the right lies, and the merits of each question. This is considered the duty of the papers.

The Japanese Press has, in some sense, sprung into highly developed life and strength without going through that process of evolution which has characterized our own. Those who have seen specimens of the English newspapers of the middle of the last century can hardly have failed to remark the paucity of their information, the timidity of their criticism, and the poverty of literary talent they exhibited. Now, every Londoner has a sheet placed on his breakfast-table often containing an essay which, if written in the last century, would have kept its place among the literature of the time, and any attempt to rival which produces a despair known only to those who have attempted it. It would be idle to pretend that the range of thought or knowledge in this country, the very language of which does not admit of any such developments as those we speak of, would enable even its best writers to rival the efforts made by the daily Press in such cities as London or Paris. But what we see with so much gratification here is the attention paid to large questions, the firm consistency of the articles in the newspapers, their definite intention, their solid, if often, erroneous opinions, their courage and good temper. These are excellent indications of sound views on the subject of the Press, of its power and its mission; and the Government, which has acted wisely in imposing apparently but slight restraints on it, should be encouraged to persevere in this course by learning that those on whose institutions they are avowedly framing their own, regard these signs with a confidence and hope which many events during the past five years have, at least, temporarily, shaken, and, at times, almost extinguished.

The *Foochow Herald* has to be credited with a sensible editorial on the settlement of the Formosa question. We quote from its remarks:—“We very greatly fear also, that the pressure of an apprehended war with Japan being removed, the old conservatism will be rapidly resumed by the authorities, and all diligence will be exerted to put obstacles in the way of the construction of the telegraph to Amoy. The high officials have sufficiently shown their animus in this direction already; and they will now be likely to calculate on having their own way about it. Thus far, however, the Agents of the Great Northern Telegraph Company have shown themselves to be possessed of great firmness, and not to be readily cajoled by mandarin duplicity. We hope that they will hold firmly to all the rights they have secured, and contend for the strict execution of all that the officials have promised.”

REVIEW.*

SOME of our readers are no doubt aware that there is a school at Paris for the study of the Japanese language presided over by Professor de Rosny, whose Japanese Grammar, published eighteen years ago, was for a long time one of the scanty aids within the student's reach. We learn that M. de Rosny is now preparing a series of works on the Japanese language which will consist, when complete, of twenty volumes, half of which are already in the hands of his students. Two volumes of this series have fallen under our notice, and it may perhaps interest those of our readers who care for the progress of Japanese learning if we give some account of them.

One is a 'Guide to Conversation' published in 1867. It consists of a nucleus of 120 Japanese phrases with translations, round which have been collected versions in Chinese characters and Katakana, an essay on the Yedo pronunciation, and some information respecting Japanese money, weights and measures. We had intended to take the first dialogue of the series and to point out in detail the errors contained in the twenty-nine phrases of which it consists, but finding that with bad grammar, faulty spelling, written forms instead of spoken, pronouns inserted where they are not required, and unintelligible or mistranslated phrases, their number amounts to forty or thereabouts, and that among them are such mistranslations as "Bonne nuit" for *Konya wa*, and such offences against spelling, grammar and propriety as are brought together in the phrase *go souwari nasare-maze* (*Veuillez vous asseoir*), it seems unnecessary to trouble our readers with a minute examination of a performance which cannot be judged by any higher standard than that of a school-boy's exercise. The value of the essay in Japanese money, weights and measures, which, however, is not the work of M. de Rosny, but of one of his pupils, may be estimated from the fact that *Kinsatsu* is explained to mean "tablettes de métal," the *jō* (ten feet), is given as equal to two *ken*, and the familiar *tempo* is described under the name of *Tōsyōk*. In the Chinese and Katakana versions of the dialogues, all the errors of the version in Roman letters have been only too faithfully copied by the "lettres de la première Ambassade en Europe de S. M. le Taïkōm" to whom M. de Rosny confided this task. "Ces lettres distinguées" M. de Rosny informs us in his preface "que j'ai l'honneur de compter parmi mes meilleurs amis, et avec lesquels j'ai entretenu pendant plusieurs mois des relations journalières, tant en France qu'en Hollande, en Prusse et en Russie, où la bienveillance du Ministère des affaires étrangères m'a permis de les accompagner, ont reçu avec soin mon manuscrit et ont transcrit la partie Japonaise dans l'écriture communément usitée au Japon, sous le nom de *zokoubon*." We do not know whether M. de Rosny still thinks that *zoku-bun*, or *zokou-bon*, as he calls it, is a kind of writing, but he must be aware, at least to some extent, upon what a broken reed he was leaning when he relied on the careful revision of his phrases by the learned attachés of the Japanese Embassy, for in his Grammar of the Spoken Language, many of the errors in the Guide to conversation have been corrected.

It is to be regretted, however, that M. de Rosny's experience in this matter has not suggested to him to trust more in future to a thorough mastery of his subject and less to the verbal statements of Japanese informants before venturing again into print. His Grammar of the Spoken Language, published six years later (1873), teems with errors which a careful attention to easily accessible materials would have enabled him to avoid, and which not even the fifteen pages of laudatory newspaper extracts which M. de Rosny has been at the pains to prefix to it, can prevail upon us to overlook. It is true that the phrases quoted as examples show a marked improvement over the "Guide to Conversation" and indicate that M. de Rosny has made considerable progress in the interval in his mastery of the spoken language, and perhaps also that he has secured the aid of a more candid Japanese critic than his friends of the first Embassy. As a grammar, however, it cannot be pronounced a success. It

abounds with errors of so grave a character as entirely to neutralize any benefit which might otherwise be derived from it.

At the risk of wearying our readers, we shall endeavour to substantiate this statement by pointing out a few, and but a few, of the principal errors contained in the chapter on the Verb.

In the first section of this chapter we are informed that Japanese verbs are conjugated in three principal voices—the active, passive and neuter, but we find to our surprise that no paradigm of the neuter voice is given, nor is it so much as mentioned again throughout the chapter.

A little way on we come to the statement that "In the polite language verbs are conjugated invariably with the help of the auxiliary *mousu*. This is of course incorrect, as every one with the most elementary knowledge of Japanese must know. No matter how polite one is, a considerable proportion of the verbs are conjugated without *mousu*, and there are numerous instances even in M. de Rosny's own examples where one verb in a sentence is conjugated with *mousu* and another without it.

The rule given for the formation of the passive voice is as follows:—"The passive voice is formed by changing the *e* or *i* final of the root of the active verb into *are*." Few of our readers will require to be told that this rule is grossly incorrect. It would give such forms as *tibararu* for the passive of *taberu*, to eat, and *mareru* as the passive of *miru* to see. The very example which M. de Rosny gives of the conjugation of a passive verb is *mirareru*, which he conjugates throughout its moods and tenses without a suspicion that it is formed contrary to his own rule. But as we shall see presently, this is by no means the only instance where M. de Rosny, after laying down a rule, immediately proceeds to falsify it by the examples which he adduces.

By ringing the changes on active, passive, adjective, causative, optative, impersonal and honorific verbs, the paradigms with *mousu* have been ingeniously spread over forty pages, when they might easily have been disposed of in two, but as most of the errors in these paradigms have been repeated in the ordinary conjugation (which M. de Rosny oddly describes as "un système de conjugaison particulière") we shall pass on to it at once.

The Latin form of conjugation according to moods, tenses and persons has been taken as a model. This arrangement is objectionable in many ways, but chiefly because it accustoms the student to prefix a pronoun to all his verbs, which, it need hardly be said, the Japanese language rarely does. The ill-effects of learning the verb in this way may be seen in the "Guide to Conversation" where there are multitudes of pronouns which no Japanese would ever introduce in speaking. It may be observed that *kare*, the word given for 'he,' does not belong to the spoken language.

In Section 133, we are told that the roots of verbs of the 1st conj. (2nd conj. of Aston's grammar) end in *e*. This omits entirely the considerable class of verbs of this conjugation whose roots end in *i* such as *ochiru*, to fall, *dohiru*, to be able, &c.

Section 134. From this rule given here for the formation of the Imperative mood M. de Rosny seems to think that in the 1st conj., the root may be used as an imperative without the addition of *yo* or *ro*, and, in the paradigm, *todome* is given as well as *todomeyo* and *todomero* for the imperative of *todomern*.

Section 137. The ordinary future in *ō* as *todomēyō*, *dōkiyā* is entirely omitted, the compound tense *todomērū dārā* being the only form given.

Section 138. Conditional Present. The rule for forming this tense is given correctly, but on referring to the paradigm we find two forms *todomareba* and *todomaraba*, both of which are erroneous. One of these is perhaps a misprint.

Section 141. Concessive mood. In all the paradigms in this grammar the tenses of this mood are formed with the help of 'to iyedomo' a phrase which is not used in conversation. No mention is made of the ordinary word used for this purpose, viz. *keredo* or *keredomo*, or of the uncomounded form *todomeredomo*.

Section 150. The correct rule is given for forming the Imperative of the Second Conjugation (1st Conj. of Aston's Grammar), but in the paradigm we find the errone-

* Guide de la conversation Japonaise, par Leon de Rosny, Professor à l'école impériale et spéciale des langues orientales 1867.
Éléments de la Grammaire Japonaise (langue vulgaire) par Léon de Rosny, &c., &c., 1873.

ous forms *yorokobeyo* and *yorokobero*, as well as the correct form *yorokob*.

Section 151. The rule given in this section for forming the Conditional Present of the Second Conjugation gives us such forms as *konomaba*, *yomaba*. This is quite a different tenso from the Condit. present of the First Conjugation, and in the spoken language is only used in *naraba* from *naru*, and perhaps one or two other cases. The ordinary conditional forms *konomeba*, *yomeba* are nowhere mentioned.

Omitting the Third Conjugation, which is only a variety of the Second, we shall now pass on to the Negative Conjugation of verbs. The well-defined rule which determines when the final vowel of a verb is modified before the Negative Particle *nu* is nowhere stated. We are merely told that the greater number of verbs do so, and M. de Rosny's ideas upon the subject may be gathered from the rule which he gives for forming the Negative of verbs terminated in *erou*.

"Il faut d'abord rechercher le radical qui exclut la finale *rou*, et ajouter à ce radical renforcé la suffixe negative conjonçable." What is here meant is made clearer by the examples. *Todomanou* is given as the negative of *todomerou*, and *tatouou* or *tatenou* as the negative of *taterou*. (*Tatenou* is elsewhere given as the negative of *tateou*.) It is evident from this that M. de Rosny has still to learn the distinction between the intransitive verb *tateru* to stand with its negative *tatenu*, and the transitive verb *tateru* with its negative *tatenu*.

The paradigm of the negative verb absolutely swarms with blunders. Three forms are given of the Imperative viz.: *Kawanai*, *kawan*, and *kawanayo* all of which, it need hardly be said, are incorrect, and the two last not words at all. The future *kaumai* and the participle *kawazu* are entirely omitted, while the gerund is given as *kawanatte*, and the past participle as *kawanatta*, neither of which forms have any existence except for M. de Rosny and his students.

We repeat that these are only a few of the errors in this one chapter. An entire weekly number of this journal would not suffice for a complete enumeration of the errors contained in the whole work, but from the samples given above our readers will be able to form their own opinion of M. de Rosny's attainments as a Japanese scholar. At the same time, as the one-eyed man is king amongst the blind, or, as the Japanese proverb has it 'The bat is the pride of No-bird-town,' so in Paris M. de Rosny may perhaps be justly regarded as a burning and a-shining light of Japanese learning. If so, Paris, although, in many respects 'not far from the centre of civilization' as was lately observed by the Lord Mayor of London, in paying a compliment to M. de Rosny, must be reckoned simply nowhere in the matter of Japanese scholarship. Among the communities of Yokohama and Yedo alone it would be easy to point to at least six or eight scholars of equal or superior attainments to any who have studied in Europe, whilst none not inferior to M. de Rosny in the extent and accuracy of their knowledge of Japanese can be counted by dozens.

Our advice has very little chance of reaching M. de Rosny, and as his first book on Japanese was published so long ago as 1856, it is perhaps too late to expect improvement from him. But if he controlled his *cœrœthes scribendi* and employed his time in study and in instructing his pupils from the best text-books, it would be found, we have no doubt, that the cause of Japanese learning in Paris would be a considerable gainer.

THE REVIVAL OF PURE SHINTÔ.

(Continued from our last.)

The globe called *Yomi* is identified by both Hatori and Hirata with *Yomotsu-kuni* or *Yomi no kuni*, the region whither Izanami betakes herself after the birth of *Hominubu*, the god of fire. Other names for it are *Ne-no-kuni*, literally the 'root-region,' because of its being at the root of the earth, *Soko no kuni*, or the 'bottom region,' *Shita-tsu-kuni*, or the 'under region,' and *Ne-no-katasu-kuni*, from *kata-sumi*, one corner, used in the sense of lowermost or most distant. *Yomi* is explained to mean darkness. The reasons for identifying *Yomi no kuni* with the moon are several. In the first place the element *Yomi* in the name *Tsukoyomi no mikoto* is evidently the

same as *Yomi*, 'the kingdom of darkness,' whither Susanowo no mikoto finally proceeded. Secondly, although in the Kokiji the rule of the sea is given to the latter god, one of the parallel passages of the Nihongi speaks of Tsukuyomi no mikoto as being appointed ruler over the multitudinous salt-waters. The murder of the goddess of food is attributed to the former by the Kojiki, to the latter by the Nihongi.³³ The fact that the tides of the sea actually follow the moon's movements is another reason for assuming these two gods to have been one. As the whole region pervaded by the light of the sun was called *hiru*, or day, the expression *yora no wosu kuni*, 'the realm of night,' over which the Kojiki says Tsukuyomi was appointed to rule, would be extremely appropriate to *Yomi*, from which the sun's light would be intercepted by the earth³⁴. Hirata further points out that the notion of *Yomi* being the abode of the dead is comparatively modern, and that the few gods who are spoken of in the ancient records as having gone thither, were still in the body when they did so.

Diagram 5 exhibits a marked difference between the two writers in their theories as to the subsequent development of the system of the three bodies. In Hatori's diagrams the sun continues to be attached to the earth until after the descent of Ninigi no mikoto, while Hirata places the separation at some time antecedent to the descent of Izanagi and Izanami. This divergence is owing to the different explanations given by them of the *uma-no-ukihashi* (literally, heaven's floating bridge) which Hatori represents as an axis connecting the sun with the earth, which is ever growing longer and consequently thinner, while Hirata interprets it to mean some kind of huge boat, in which the gods went backwards and forwards between the two bodies.³⁵ He argues that the phrase "this floating region" used of the earth by the celestial gods in commanding Izanagi and Izanami to form and harden it, can only be interpreted on this theory, for if the separation had not taken place the term "floating" could not have been applied to the earth alone. He consequently represents the sun detached, and to the right of the earth above it. The spear (*nuboko*) which was given to this pair for the purpose of forming the earth is supposed by him to have been of iron in the form of the lingam, and *nu*, which is interpreted to signify *tama*, a ball, has a profound signification if this view be adopted.³⁶ The passage quoted here by Hirata from the *Koshi* says that "The two gods, setting forth on the *uma-no-uki-hashi*, pushed down the spear and stirred the plain of the green sea."³⁷ When they drew it up after stirring it round and round, the drops which fell from its end, spontaneously consolidated and became an island. This was Onogorōjima." This name was given to it on account of its 'spontaneous consolidation,' and to distinguish it from the other islands of Japan, which were begotten by Izanagi and Izanami in the ordinary manner. They descended on to this island, and planting the *nuboko* in the ground point downwards, built a palace round it, taking it for the central pillar which was to support their roof. The point of the spear became the axis of the earth. Onogorōjima is identified by the author of the *Jindai Kuketsu* with a small island at the north-west corner of Awaji in the eastern part of the inland sea, called Ye-shima.³⁸ Close by is another island called Sekirei shima, (Wagtail island,) and there are many other traces of the ancient tradition in the neighbourhood. The motion imparted to the fluid mass of the earth by the stirring with the *nuboko* was the origin of its daily revolutions.³⁹ Onogorōjima was thus originally at the north pole, but subsequently removed to its present position. In what manner this happened we are not told. Nevertheless, Japan continues to be on the summit of the terrestrial globe. It appears that someone having objected that if Japan were on the top of the world, and opposite to the sun, the sun would be in the

³³ Kojiki-Den, vol. IX, p. 9.

³⁴ Sandai-kō, p. p. 15 and 16.

³⁵ Tama no Mi-hashira, Vol. II, p. 26.

³⁶ Koshi-Den, Vol. II, p. 23, note.

³⁷ This is a literal rendering of *ura-una-bura*, Hirata, however, assumes the term to mean the appearance of the semi-fluid earth as it was seen from heaven, and rejects the common explanation.

³⁸ Koshi-Den, Vol. II, p. 16.

³⁹ It is hardly necessary to note that this is not warranted by anything in the ancient records, as the earth was always supposed to be stationary until the Japanese learnt the opposite from Europeans.

zenith at the equinoxes, Hatori was puzzled and referred the point to Motoōri, who replied that as the sun and moon move round from East to West, and not from North to South, it is evident that the globe, in spite of its being round, may be said to have sides, that is, top, bottom, right, left, back and front. Just as the face of a man is not on the top of his head, but on the front, so Japan, being in the middle of the top has the sun and moon on its south, which is therefore the front; the north is consequently behind, the east is the left side and the west the right side. From which it is perfectly clear that Japan is on the summit of the terrestrial globe. The objector replied that all countries which have the sun on their south would have an equal right to claim the same position. The answer to this is that the position of Japan is not determined by the fact of the sun and moon being in front of her, but the manner in which they appear to her is owing to her position at the top of the earth. Hirata strengthens the argument by pointing out that Japan altogether escaped the deluge which took place in China in the reign of Yuou, and also the Noahian flood which drowned occidental countries, solely through her elevated situation. China suffered less than the west, and Corea less again, on account of their proximity to Japan.

The only mention made of the stars in the ancient writings is in the Nihongi, where the star-god Kagase-wo-no-mimi⁴⁰ is spoken of as being at first unwilling to submit to the fore-runners of Ninigi no mikoto, but nothing is said of the manner in which the stars came into existence. According to a theory proposed by one Satō Nobufuchi, which is quoted by Hirata with approval, when the two gods lowered the spear and stirred round the chaotic mass out of which the earth was to be formed, the muck which was unfit to enter into the composition of the earth was removed by the action of the spear point, and scattered lump-wise in all directions throughout space, taking up positions more or less remote. The five planets, the twenty-eight constellations and the host of common stars being thus formed, revolve round the sun together with the earth.⁴¹ Hirata has another view of his own, which is, that as the Thing which formed in space, and afterwards developed into the sun and the earth, is said to have resembled a hen's egg in shape, when the Thing separated, its shell must have burst, and the fragments flying off on all sides, would begin to revolve round the sun, being attracted by the powerful rotatory motion of that body.⁴² It is customary to suppose that the stars have no practical purpose, but it is evident that they are intended to guide the course of those barbarian mariners, who, if they knew their duty, would bring ships laden with tribute to the Emperor of Japan.

Diagram 6 in the Tama no Mi-hashira represents the sun as in the last, with the five black spots which stand for Celestial gods, and the earth is now marked off into Japan, foreign countries variously situated below it, and the sea. The passage from the Koshi on which this diagram is based narrates what may be euphemistically termed the courtship of Izanagi and Izanami,⁴³ which resulted in a child of so poor a consistency, that he was unable to stand on his legs when he had reached the age of three years. They put him into a boat woven of rushes, which were the only available materials then existing, and abandoned him to his fate on the wide ocean. Another child which they begot, named Awa no shima, was also a failure, and they were driven to ask the advice of the

40. Also called Amatsu-mika boshi and Ama-no-kagase-wo.

41. Koshi-Den, vol. II, p. 36.

42. Idem, p. 38.

43. The following is an almost literal translation. Tunc Izanagi quiescivit ab Izanami. "corpus tuum quo in modo factum est." Et illa: "Corpus meum crescentem crevit, sed locus est qui continuus non crevit." "Corpus meum," inquit Izanagi. "crescentem crevit, sed locus est qui superfluum crevit. Nunc mihi propositum est, si tibi videtur, mei corporis eum qui superfluum crevit locum, corporis tui in eum locum inserere qui non continuus crevit, et terram generare." Izanami respondit, "Commidum erit." Tunc Izanagi. "Ego et tu, quin circumneantes celestem hanc columnam, thalamo jacundae coimus." Hac pactione facta, "Tu sinistra," inquit Izanagi, "ego autem dextra, circumneantes occurremus." Haec pactione facta ubi circumneantes faciem facie opposuerunt, Izanami primum "O adolescentem venire," deinde Izanagi, "O virgo venusta." Postquam haec locuti sunt, Izanagi, nullo modo gaudens, dixit sorori, "Me decebat primum loqui, quia vir auctor; non est foeminae primum verba facere." Sed ubi incipientes (sc. opus procreationis) cohererunt in thalamo, artem ignorabant. Tunc advolavit mota cilia, qui caput caudam que movebatur. Dil hoc imitantes, coitionis viam cognoverunt, et futurum huiusmodi similes pepererunt.

Celestial Gods. The Celestial Gods had recourse to divination, which is explained to be a means of obtaining from divine beings knowledge or information, without their being aware of it. It seems strange that the three gods who hold the highest rank among their race, should not have been able to give a direct answer without applying to some one else, but Hirata explains this apparent anomaly by the analogy of a prince who charges each of his servants with some branch of affairs, and in answer to a request for information on any point refers the inquirer to the servant who knows all about it. The answer to Izanagi and his consort was that they should try over again, and as they carefully avoided the error which they had committed on the previous occasion, they were very successful. The first of the series of children which they now begot was Oho-yamato Akitsushima, the main island of Japan, and it was born with a caudal, which is the present island of Awaji. Both of the names Yamato and Akitsu-shima originally belonged to the present province of Yamato, the former dating from a late period of the so-called Divine Age, the latter from the reign of Jimmu Tennō.⁴⁴ They were afterwards extended to the whole of the main island, but are no longer so employed. Next were born the island of Iyo,⁴⁵ which had one body and four faces, Tsukushi⁴⁶ with one body and five faces, Iki, Tsushima, the triplets of Oki, and Sado. According to a variation of the legend Oki and Sado were twins. Awaji is added to the others to make up the number of eight, whence the name of Oho-ya-shima-kuni, the Country of Eight Islands, applied to the whole empire of Japan. No mention is made of what are now called Karafuto, or Sagalien and Yezo, which were probably discovered at a much later date than the 8th century, when the Kojiki and Nihongi were committed to writing. The legend also speaks of the birth of other islands, one of which was Kibi no Kojima, now divided into Bizen, Bingo, Bitchū and Minasaka, Adzuki shima in the inland sea, now called Shōdzu shima, Hime shima off Hizen, Chika shima, supposed to be the Gotō islands, and the Futago shima, which cannot be identified. The remaining small islands were formed by condensation of the foam of the sea. After the country had been thus produced, the two gods bestowed on them all things; and next, seeing that the land was covered with mist, Izanagi produced the two gods of wind, male and female, from his breath.

Hatori has a long note showing that the islands of Japan were begotten in exactly the same manner as human beings and everything else that has life, whether animal or vegetable, and being quite small at their birth, gradually increased in size by the accretion of matter. The result of the birth of Japan was that the sea and land were gradually parted, and the way thus prepared for the formation of foreign countries by the spontaneous condensation of the foam of the sea. Hirata finds this truth concealed in the statement about "the remaining small islands," a not unique example of interpreting ancient records so as to fit in with the progress of modern discovery.

The god of fire was the last child in whose conception the two gods shared. He is called Homusubi and also Kagutsuchi, and Hirata thinks he ought to be identified with the element itself. The goddess suffered great pain in bringing him into the world, and from the matter which she vomited forth in her agony originated the god and goddess of metal (*Kane*), Hirata derives the word *konayama* (a metalliferous mine), which forms part of the names of these two deities, from a contraction of *kare-nayamashi*, to cause to wither and feel-pain. In consequence of Izanagi breaking her injunction not to look upon her face during the period of her retirement, Izanami departed towards the other region, but bethinking herself that the god of fire, if left uncontrolled in his actions, would bring ruin on the upper world, she returned for a short time and produced from her sleeves the gods of clay and from her water

44. The Chinese posthumous names of the early *mikados* are supposed to have been determined in the reign of Kuanmin (742-806). The earliest case of one being applied was in 758, when the posthumous title of Shōun was given to the reigning Mikado's predecessor. See Kojiki-Den, Vol. XVIII, p. 3.

45. That is Shikoku with its four provinces.

46. Tsukushi is the ancient name of Kyūshū, which was originally divided into five provinces, Tsukushi, Toyo, Hī, Himeka and Kumaso.

the god of fresh water, whom she commissioned to pacify the god of fire whenever he was inclined to be turbulent. Clay and fresh water were produced at the same moment as the gods which rule them. From the statement that Izanami forbade the god to look at her during seven days and nights, Hirata argues that day and night already existed, which supports his view that the sun was already separated from the earth. As the earth revolved, it was day when it was opposite to the sun, and night when it was turned away from the sun. He neglects, however, to explain how the earth, to the bottom of which the moon was still attached, could do this, and the expression 'opposite to the sun' is extremely obscure. It is at least evident that according to this theory of Japan being on the top of the earth, the 'kingdom of darkness' must have been illuminated whenever Japan was in the dark.

After the departure of his companion, Izanagi took vengeance for her loss upon Kagutsuchi, whom he clove into three pieces with his sword. From these pieces originated the gods of thunder (*Ikadzuchi*) of mountains (*Oha-yamatsumi*) and of rain (*Takao-kami*). The blood which fell from the edge of his weapon flew up to the sun, and was converted into unnumbered rocks in the dry bed of the Ama-no-yasu-no-gawa, and the blood which fell from the guard and point, as well as that which remained on his hand, spilt on to the rocks thus formed. Blood and fire being the same thing, the sun thus became a receptacle of heat.

The next event was the visit of Izanagi to *Yomi*, with the object of finding Izanami and inducing her to return to the upper world. No precise information exists with reference to the road by which he travelled, but it is supposed to have been a hole through the centre of the earth, the outlet of which is at Ifuyazaka (pronounced Yūyazaka) in Idzumo. "When Izanami no mikoto came forth from her palace door to meet him, he addressed her, saying, 'My dear sister, come back again, for the country which you and I made is not yet finished.' She replied, 'Lamentable indeed that you came not earlier. I have eaten of the cooking of *Yomi*. Nevertheless, as my Brother has graciously come hither, I would desire to return. To-morrow I will discuss it fully with the god of *Yomi*. Do not look for me, my Brother.' Saying this she returned within the palace. A long time elapsed, and he felt impatient, so breaking off the end-tooth of the many-toothed comb which he wore in the left bunch of his hair, and lighting it, he entered in to look. He found her over-run with maggots and in a state of semi-putrefaction." The legend goes on to relate Izanagi's struggle to escape, during which he created various gods, one of whom, called Kumado no kami, was produced from his staff. Another was Chigaheshi no kami, the rock with which he closed up the road. Izanami's reason for not returning was that she had eaten food cooked with unclean fire, and was defiled thereby. The god of fire hates impurity, and she was afraid of his wrath. It is well-known that it is impossible to succeed with a casting if the metal has been melted with fire which is not perfectly pure. As soon as Izanagi returned to earth he hastened to wash himself in the sea, at a locality which cannot be precisely determined, but it appears to have been either in Hiuga or Chikuzen. The legend says, "The names of the gods whom he produced by blowing when he plunged into the middle shoal and washed, were Yaso-Maga-tsuh no kami and Oho-Maga-tsuh no kami. These two gods originated from the pollution which affected him when he went to that region of perpetual foulness." * * The names of the gods whom he produced by blowing in order to correct the evil [to be done by the two last] were Kamu-Nawo-bi no kami and Oho-Nawo-bi no kami. * * The name of the god who originated subsequently when he washed his left eye was Ama-terasu-oh-o-hiru-me no mikoto, and the name of the god who originated when he washed his right eye was Tsuku-yomi no mikoto, also called Take-haya-Susanowo no mikoto. Then Izanagi no kami rejoiced greatly, and said, "I have begotten Child upon Child, and at the end of my begetting, I have begotten me two rare Children." Now the brightness of the Person of Ama-terasu oho-mi-kami was beautiful, and shone through heaven and earth. Izanagi no kami spake, and said, "Though my children are many, none of them is like this miraculous

Child. She is not to be kept in this region." Then taking the necklace of precious stones from his neck, and rattling it, he gave it to Ama-terasu oho-mi-kami, and spake, commanding her in these words, "Rule thou over Takama no hara." As the distance between the sun and the earth was not great at this period, he sent her up by the *Ame-no-mi-hashira*. * * Next he spake unto Take-haya-susa-no-wo no mikoto, and commanded him, saying, "Rule thou over Awo-una-bara, and the multitudinous salt water." * *

The statement that Takehaya-susa-no-wo is another name of Tsukiyomi is not to be found in any of the ancient texts, and is an emendation of Hirata's, founded upon the grounds already noticed for supposing the two gods to be in reality one. The *Ame no mi-hashira* was supposed by Mabuchi to be one of the gods of wind, but Hirata explains it to be one of the *hashidate* of which mention has already been made. In the Koshi-Den he makes Yaso-maga-tsuh no kami and Kamu-nawo-bi to be simply alternative names of Oho-maga-tsuh no kami and Oho-nawo-bi. The birth of the first was intended as a mark that Izanagi had purified his body from the pollution which he had brought back with him from *Yomi*, and he sprung from Izanagi's strong resolve to get rid of those pollutions. Hence this god utterly detests defilement of whatever kind, and becomes violent in his conduct whenever any unclean thing is done. His name is derived from the calamities (*maga*) which he causes. Motoori's view that this god was actually produced from the filth of *Yomi*, and is therefore an evil god, is wrong. Apart from the wrath which he manifests on certain occasions, he is disposed to do good, as is evidenced by his having planted the whole of Japan with trees, the seeds of which he brought down from heaven. Nawobi no kami was similarly produced by the earnest desire of Izanagi to remedy the evils which might be produced by the zeal of Maga-tsuh no kami. Both gods and human beings have in them the spirit of these two gods, wherefore they are angry with whatever is foul and wicked, and are tempted to act violently. It is Nawobi no kami's spirit which moderates their wrath, and disposes them to mercy.

Hirata endeavours to prove that *awo-una-bara* means the whole earth, and that the phrase "multitudinous salt-water" is only added for the sake of emphasis. He derives *umi* (of which *una* is only another form) from *umu*, to beget, to bear, and interprets *unabara* to mean the 'just-born plain.' *Awo* is green, applied either in the sense of young, or because the earth seemed to be of a green colour when viewed by the celestial gods from above. It will be remembered that Izanagi and Izanami dipped the spear into *awo-una-bara*, and separated the dry land from the sea, so that if Hirata's etymology were correct the name would be no longer applicable. The safest theory is that *awo-una-bara* means simply the 'blue waste of sea,' and that the ancient inhabitants of Japan amongst whom these different legends sprang up, never thought of trying to make them consistent with each other. Hirata's theory seems to have been invented to prove that Susanowo was first made ruler over the earth, but preferred to go to his mother in the moon, thus leaving the earth vacant for Ninigi no mikoto, who being in a certain sense the joint offspring of Susanowo and the sun-goddess, united in his person all the rights of Izanagi and Izanami. The rest of the Tama no Mi-hashira is occupied by the legends relating to Oho-kuni-nushi's first occupation of Japan and the descent of Ninigi no mikoto, which have already been briefly summarized in a former part of this paper. The separation of the moon from the earth, which is figured by him in his tenth and last diagram, is supposed to have taken place after the visit of Ohokuni-nushi to the lower world. Hatori agrees with him on this point, but supposes Oho-kuni-nushi to have gone to the moon after his surrender of the Empire to Ninigi no mikoto, whereas Hirata maintains that he rules over the Hidden World, which is on the earth.

(To be Continued.)

COREA.

[TRANSLATION.]

(From the "Nishin Shinjishi," November 27th, 1874.)

I have observed in a late number of your Journal an article taken from the Yokohama newspaper called the *Herald*. The writer observes that the Empire of Japan is about to re-open commercial relations with Corea, but that the Government have not yet formed any plan. He hopes, however, that the Japanese Government will take some decisive action in a matter which promises so great advantages.

We have felt compelled to ascertain the honored opinions of the ablest and most distinguished men upon this subject, and to add to them our own feeble ideas. This is a matter of the deepest moment for Japan, and although our ancient custom prevents its being laid before the people for discussion, we have felt it our duty to consider it and to state our views upon it with reference to the position as subjects and to the private opinions of the inhabitants of this Empire.

In No. 56 of this year of your Journal we have already pointed out that the arguments used by China in the matter of the savage tribes of Formosa are opposed to reason, and that she has no right to claim them as her subjects. On consulting our ablest and most eminent men, we learnt that their views coincided with our own. The negotiations which have taken place between our Government and that of China have been founded on no other basis than this. The Chinese Government have at last made peace by giving an indemnification for the crimes of the savages, and it has been established that they were in the wrong and we in the right. The victory has been on our side, and yet we shall not be reimbursed the tenth part of the expenditure incurred. The remainder must be taken in taxes from the people.

We are nominally under a monarchical system of Government, but the reality does not yet exist in its completeness. The old abuses still remain unreformed; each province has different views on public matters, the ideas and feelings of the samurai are opposed to those of the other classes of the people, the officials seem to tread in a wholly different path from the nation, and the people's wishes are not yet realized.

In such a condition of affairs we do not see how there can be any business so urgent as to draw our attention away from the question of orderly government at home. There was some time ago a question of sending an expedition against Corea. It was not decided to do so, but this enterprise became diverted in a curious way and an expedition against Formosa was undertaken. Some unforeseen disaster was to be feared at this time if the question of good government at home were neglected. I hear that the Coreans have made us friendly overtures and propose to re-establish our former relations with them. It is to be hoped that by patiently watching a favorable opportunity and suiting our action to the circumstances, we may impress them with a sense of our good feelings towards them. There is no better plan than to be patient, where patience is necessary, and to prepare for the future by using kindly language towards them, and except they insult us, it will be better not to start the question of commerce all at once. If we attempted suddenly to force upon them a policy to which they were repugnant, it might be impossible to preserve peace. And although China and Japan are now at peace, is it reasonable to suppose that the former looks forward to the future tranquilly and with an unoccupied mind? If Japan tried to cause Corea to accept her views all at once, difficulties might arise suddenly between the two countries. If in such a case China did not assist Corea, it would be with the malicious object of seizing an opportunity later, like the cur of the proverb who seizes the opportunity when the two tigers are wearied out with fighting. In short we should take the greatest care and precaution against a miscarriage in our policy.*

This is an important matter for Japan, and it is essential that no decision should be come to in regard to it

without mature deliberation. Nevertheless, if a policy is adopted such that a favourable result may be counted certain, and if this policy is firmly adhered to, our apprehensions will no doubt prove to have been unfealed for, and the event will not only be fortunate for Japan, but will deserve to be described as a great success of which she need not be ashamed before civilized nations.

But if a great plan is to be resolved upon, and if when resolved upon it is to be adhered to firmly, we have some observations to make respecting this firmness.

It is our hope that no time should be lost in establishing a "Deliberative Assembly Chosen by the People"; that the mischievous prejudices of our old system of public policy should be thrown aside, and that the people should be consulted upon the plan to be adopted and the public made to decide upon it. By this means we should have a firm and unmistakable policy which would satisfy the national mind. If this be not done, even our bravest samurai will not be able to maintain the cause of Japan in a war against another country. Let there be established a "Deliberative Assembly Chosen by the People" and before taking action, let us have a definite public policy formed, remote from the influence of interested prejudices. People reject as too rash the idea of a Deliberative Assembly chosen by the people, but inasmuch as its object is to obtain a public policy which shall not be deviated from, by consulting the people on the plan to be adopted, and referring the decision to the public, thus arriving at a policy which shall satisfy the nation, it is far from deserving to be called rash, but is on the contrary a weighty and judicious measure. The rash measures of our present statesmen are something much worse than this (the Formosa Expedition is commonly spoken of as an extremely rash undertaking). Their rashness is in opposition to the maxim that the people should be consulted and their decision accepted, and must be accounted an evil from which the greatest errors arise.

To conclude, the Corean question is one in which our interests are deeply involved, and if it is not dealt with in accordance with public opinion, much misery and difficulty must ensue. It is not a matter to be settled in a single morning. Our best plan is to exercise patience, to watch for favorable opportunities and safe policy. Our anxiety has prompted us to inquire the opinions of able and eminent men, and we hope that their replies will calm our hearts full of old-womanly care.

BAJO,
A fisherman of the Western Sea.

USEFUL MINERALS AND METALLURGY OF THE JAPANESE.

By DR. GEERTS, OF NAGASAKI.

*Read before the Asiatic Society of Japan 18th
November 1874.*

According to the Japanese naturalist *Ono Ranzan*, copper was melted in Japan for the first time in the year 698 A.D. at Inaba in the province Suwo, whilst ten years later—in 708—the first Japanese copper-money "*Wa-do-hai zen*" was cast in the province of Musashi.*

The different ores of copper and Japan which have come to our knowledge, are:

First.—COPPER PYRITES, the most important of all Japanese copper-ores. It varies greatly (2-14 per cent) in the quantity of copper which it contains. Several samples, which we collected in different parts of Japan, contain much less copper than the good copper-pyrates from Devonshire. With few exceptions, the quality of the Japanese copper-pyrates cannot be said to be excellent; the enormous quantity, however, in which this ore is found in nearly every province of this country, makes a worthy compensation. We rarely saw bright brass yellow ore, but often yellow-grey amorphous masses, containing a considerable amount of iron—and arsenical pyrites. The Japanese names for this ore are: *Do-ko-teki* or *Hakuishi*, *Syn.* *Akagane-no-arakane*. It forms with the three following minerals the source of all Japanese copper. Besides these there are also several other copper-minerals in Japan, but these are not, or very seldom, used in copper smelting.

* *Wa-nen-kei* or chronicle of Japan, translated from the origin by Prof. Hoffmann in Siebold's *Nippon Archiv*.

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The Japanese Copper pyrites of some provinces (Sado, Dewa; Iwami, Tazima, &c.,) contains a little gold or silver or both metals, which the Japanese know very well to separate by a *liquation-process* [see later under silver.]

Second.—COPPER GLANCE occurs in many places with copper pyrites, and is used with the latter ore in the copper-metallurgy. The specimens which we have received constitute amorphous masses of a dark grey colour and are of good quality. The Japanese know very well that copper glance gives a much richer copper-slag than copper pyrites. They melt it often with the latter ore together, because it promotes the fusibility of pyrites and a better kind of copper. The scientific Japanese name (Sinico-Japanese) for this ore, we have not been able to find out, it is ordinarily called "*kuro-do-seki*" (black copper-stone). It is not found in such large quantity as copper pyrites, but still it is far from being rare. It is found in large quantities in the province of Dewa at Akita.

Third.—VARIEGATED COPPER ORE OR PEACOCK COPPER. Seems to be rarer in Japan than the two former ores. *Burger* (l. c. page 10) states that it occurs in large quantities in Sendai, Nambu, mount Monoko, where it is smelted together with copper pyrites. I was not able to learn the exact Japanese name and did not find a description of this ore in the above mentioned Japanese sources. In many pieces of copper pyrites out of different provinces, I saw an admixture of peacock copper. In Tō and Toza especially it occurs in considerable quantity mixed with copper pyrites.

Fourth.—GREY COPPER ORE or "*Fahlertz*," a very compound mineral, containing variable quantities of sulphites of copper, iron, arsenic, antimony, lead and often silver. This ore is not rare in Japan; we have seen good specimens from Satsuma, Hiūga, Cho-shn, Toza, Tō, Setsu, etc. Grey copper ore and copper-pyrites are the chief ores of Sumitomo's large copperworks at the mountain Besi-san in the province Tō (Shikoku) where the silver is also extracted by a process of cupellation.

These four ores are the sources of Japanese copper; the two first named are the most important for copper metallurgy. The last named is also of value in gold and in silver smelting. These minerals have produced the enormous quantities of copper smelted in Japan since the 10th century; they formed the chief trade of the Dutch and Chinese at Nagasaki during the period 1609-1858. The quantity of copper exported by the Dutch during that time amounts at least to more than four millions of piculs, whilst the Chinese undoubtedly have exported a still larger quantity. Besides the use of copper in daily life for all kinds of household goods, doors of godowns, ornaments, temple-furniture, mirrors, smoking utensils, brouzes and especially copper money, copper has been for many centuries and is still so common and general, that it may be just called "the national metal of the Japanese."

We will now mention some other Japanese copper-minerals, which are not used in copper smelting, but find, nevertheless, some useful applications in other branches of industry or in daily life.

Fifth.—MALACHITE (green) is found mostly scattered with the former ores, but seems not to be found in any large quantity. It occurs in irregular stalactitic aggregates of a radiate, fibrous structure with a silky lustre on the fracture and also in amorphous masses. The Japanese names for it are *ROKU-SHO* or *IWA-ROKU-SHO*, Syn. *Seki-roku*, *Hitsu-seki*, *Kon-ron-roku*. The best kinds are found in the coppermines of Ota in the province of Setsu, Ani in the Dewa province, Yamashiro-yama in Choshu, Ashiwo-yama in Kotsuke, Kusngura in the Aidsu district of the province of Sendai, etc., although very fine kinds of malachite used as a drug and paint were formerly imported by the Chinese at Nagasaki.

It is used in the Japanese porcelain-industry as a green porcelain-paint, and also as an ordinary painting or drawing stuff. It can be found in the drug shops and is also used as an external medicine against some diseases of the eye and skin. For the use of painting, powder of malachite is mixed with chalk and water; from this paste small half spheroidal grains are made, which are known under the name of *Tamu-roku-sho* or *Mame-roku-sho* (Bean-malachite), and which are sold in every drug-shop. An impure, sandy variety of malachite-sand, which is much cheaper, will be found under the name of *SUNA-ROKU-SHO*

and a greenish-white coloured kind of sillicic-malachite (earthy variety), is sold under the name of *HAKU-ROKU*.

Sixth.—BLUE MALACHITE or CHESTYLITE (earthy variety), [*Erdige Kupferlasur* or *Bergblau*] occurs in amorphous earthy masses. We did not see any fine crystallized specimens. It is dissolved easily in acids, with evolution of carbonic acid. It should be found—according to *Ono Ranzan*—in some coppermines. Ani in Dewa, Ota in Setsu, Ashiwo-yama in Kotsuke produce the best kind; at Uweno in the province of Sagami an inferior kind is said to occur. It bears the names: *KU-SEI* or *IWA-KONJO*, Syn. *Gen-sei*, *Seki-sei*, *Tai-sei*, and is used in Chinese medicine as a caustic against some diseases of the eye and malignant ulcers. But the chief use is as a drawing and painting material.

It should be observed that the name *KON-JO* is a common name used by the common people for the most different blue dyes, and principally for the Japanese Indigo (Dye of *Polygonium tinctorium* Lour.) This latter substance has, however, its own proper name, namely, *RAI-DEN* or *Ai-no-ori*. True *Kon-jo* is blue copper-malachite.

A sandy variety of this ore is found also in Japan and is called *HENG-SEI* or *SUNA-KONJO*. It should be known that, after the introduction in Japan of European Ultramarine, the name *Suna-konjo* is also given by Japanese drug-merchants to this latter substance. Real *Suna-konjo* is mountain-blue.

Seventh.—BLUE VITRIOL, BLUE STONE (sulphate of copper) is found in general Japanese coppermines either as an earthy aggregate, or in solution as "blue water," both being disintegrating products of copper-pyrites formed by a long continued action of air and water. The Japanese also know how to prepare this salt by roasting copper-pyrites with free access of air and treating the roasted mass with water. This salt is, however, very impure. It can be found in every drug-shop under the name of *TAN-PAN* or *SEKI-TAN*, Syn. *Sei-seki-shi*, *Aoishi-no-ko*. Since the earliest times it has been used in Chinese medicine as a caustic in eye-disease, bleuorrhœa and bites of snakes and other animals. Its conserving properties for wood are also known to the Chinese and Japanese. *Tan-pan* is prepared either out of the mineral, or by evaporation of the "blue water" in Akita province of Dema; Tokoro-no-kuchi in Noto; Satsuma; Ashiwo-yama in Kotsuke and many other places.

The preparation of cement copper out of the "blue water" by means of precipitation with iron or zinc, seems to be unknown to the Japanese.

Eighth.—METALLIC, DENDRITICAL COPPER (copper mass) seems to be rare in Japan, according to *Burger* l. c. page 8 and *Martin* l. c. page 5. We have never seen it ourselves. It is said to be found in Iwashiro.

Nineth.—RED COPPER ORE (*cuvre oxydulé*, *HAKU*) is also found in Japan in company with ochre (brown, ochry haematite) and copper green (mountain-green). We have seen several specimens from Hiuga, Satsuma, Nagato. The quantity in which it is found, seems, however, to be small, although it occurs in several mountain ranges. It constitutes the mineralogical guide for the Japanese miners, for they consider it as the chief criterion for good copper ores and learn from this mixture of coppergreen, iron-ochre and red copper where to construct mines. The Japanese call it *yake*. The experts of mines believe they can determine *a priori* the quality and quantity of the copper ore which will be found the mountain, if they have examined the colour, the grain and other properties of *yake*. Thus the directions in which the mines are to be laid out, and the degree of declivity of the mine-roads, are chiefly determined by the occurrence of this mineral. *

These are the Japanese copper-minerals known to us. We will now describe the metallurgy of copper, since the 16th century such a valuable branch of industry in this country. It will in future remain an industry of the highest interest for Japan. It is true, many of the very old mines, worked for several centuries, commence to be exhausted or at least give, by their long mine-roads, so much trouble in bringing the ore to light, that they do not pay the cost of working. But in a country like this where copper-ore, and, especially, copper-pyrites, is found in nearly every province, new mines can be opened after proper borings and mineralogical surveys. The exhaustion

of a few very old mines does not by any means involve the exhaustion of the Japanese soil. Exaggerated as were many of the old accounts of the enormous wealth of Japan, the opinion that the sources of copper-ore are also exhausted is equally erroneous. The relatively large quantity of copper exported by the Dutch and Chinese from 1600 to 1858 is small when compared with the immense quantity of ore existing in different parts of the country. We think, however, that for giving practical results and pecuniary profit to the explorers of new mines, three principal changes will be necessary in Japan.

First.—Better ordinary roads throughout the whole country.

Second.—Liberal mining laws on the same basis as those in Western mining countries.

Third.—The introduction of Western knowledge, Western experience and Western machinery in working the mines, in removing the mine-water and smelting the ores.

The first point is so clear to every European that it is unnecessary to dwell on it. It would seem, however, that the Japanese Government is not yet convinced of this truth. What is the advantage of a few miles of railway for the thirty millions of an agricultural people, if even provinces so fertile as Kinsiu remain without good ordinary roads on which the numerous products of agriculture, the fisheries, mining and commerce can be transported on wheeled vehicles? A great many products cannot now be brought to market, because the cost of transport by means of pack-horses, oxen or human labour costs so much money and time. In Kinsiu, one of the most fertile and prosperous islands of the Japanese Archipelago, the roads are generally in a deplorable condition, and have become much worse since the abolition of the daimiates. To convey ores or metals over considerable distances good roads or canals are matters of vital necessity.

The second point should also be a question of serious consideration with the Japanese Government, because the present mining laws are inimical to the interests and welfare of the country. There is no good reason why mining companies should not be formed from the union of Japanese and foreign capital, if these companies work under the supervision and control of the Government, so far as the stipulated royalty or percentage on the net proceeds is concerned.

The third point we believe also to be necessary in order to secure good practical results. It is true that the Japanese methods of mining, but especially of smelting are, in a high degree laudable and practical, considering it is only lately that they have acquired any knowledge of chemistry and scientific mineralogy. But their methods are defective when compared with those at present employed in Europe, and if we also compare the quantity of metal obtained with that which could be obtained. Much metal always remains in the slag and stones which are cast away. Even until the year 1600 the Japanese did not separate the gold and silver from the copper ores which contained these metals.

Bürger has already described with much accuracy the manner in which the Japanese work their copper mines (l. c. page 14-99). Every one who has seen a Japanese coal-mine may learn from this how all other ores are dug, for, in Japan, for there is no difference between the processes. On a greater or less, though generally on a moderate, incline, the Japanese miner digs at the foot or in the middle of mountain his chief entrance, and is guided by his omnipotent *yake* as to the direction of the subterranean incline. As soon as he meets with veins of proper richness, he follows the direction of these veins. If the veins seem not rich enough, he digs steadily in the first or in another direction to meet with the main lode of the mine. Perpendicular shafts are not sunk by the Japanese in search of the ore. If the mine has a considerable length and depth, they construct small perpendicular ventilating shafts, as the air is not sufficiently renewed if there is only one opening. These air shafts, which unite the inclined road with the top or side of the mountain, cause a better draught of air and are therefore called *shaku-hachi* (a kind of flute) or *kase-mawashi* (wind wheeler). In small mines these air shafts are often wanting, and in these cases the miners suffer much in health from the noxious gases emitted. The quantity of carbonic acid is sometimes so great that the flames of the small open mi-

ing lamps are extinguished. The greatest labour of the Japanese miner, however, is spent upon the removal of the water from the mine. The means resorted to for this purpose are very primitive and insufficient, and the daily and nightly labour of more than a hundred men is often required to keep this enemy at bay. It sometimes happens that the whole mine has to be abandoned, when the water, especially in April and June, has flooded the mine unusually and demands excessive labour and expense to remove it. A number of defective bamboo pumps, together with small hydraulic foot wheels, constitute the only machinery for removing the water. The combined system of sucking and forcing pumps, used in Western mines, is not known in Japan, whilst the use of steam as a motive power has as yet been introduced in but very few cases.

To bring the ore to light, the Japanese miner goes to the mine in the morning with a primitive kind of Roman lamp, consisting of a shell or small basin filled with oil, and a wick made of the pith of a kind of rush. He detaches the ore with two kinds of instruments, one of which closely resembles our double cutlass, the other being a mining chisel and hammer. The ore is nearly always extracted in small pieces to prevent the falling down of the inside of the mine, though proper care is taken to support it by wooden stays. A straw or bamboo basket receives the ore, but cannot contain more than 80-90 lbs. of mineral. The filled baskets are then dragged along the often long and steep incline of the road by means of a straw rope bound round the body of the workman or of women or children. Sometimes the baskets are carried on the backs of the miners. The wages paid to the miner are mostly according to the weight and quality of the *hakuishi* (ore) brought out by him. The ore is cleaned from the adhering stones by hammering, mostly done by women and children. Thus prepared it is ready to be roasted and melted. The roasted ore is then powdered and afterwards melted, till the so called *blistered copper* (*schwarz-kupfer*) (Jap. *aru-do*) is obtained. In former times this *aru-do* was sent to the Imperial copper refining works at Osaka. Here it was lengthened and refined to get pure "bar copper" (tough or poled copper) (Jap. *Sao-buki-do*). Lately the art of refining has been better understood in the provinces where the ore has been dug and smelted. This industry still flourishes especially in the districts round Osaka.

The extraction of the metal from the ore in Japan rests principally on the same basis as our Western continental copper smelting. The melting process according to Japanese methods is divided into several sections.

1.—Calcining or roasting the ore to expel part of the sulphur, arsenic, water &c. and powdering in order to obtain the black powder *Kudzu*.

2nd.—Fusion with silicate to remove the oxide of iron formed by the roasting process, to convert at the same time the oxide of copper, formed by the roasting, into copper sulphide, and to obtain finely a coarse metal (*spur Stein*) Jap. *Kawa-bo*=Sheave copper.

3rd.—Calcination of the coarse metal: a. to convert the still remaining parts of sulphide of iron into oxide of iron: b. fusion with some of the clay of the covering to remove the whole of the iron in the slag: and c. boiling the metal to expel the sulphur as sulphurous acid. *ARU-DO*=Crude copper.

4th.—Refining, to remove the cuprous oxide and bring the copper to tough-pitch. Tough copper, bar copper, *SAO-BUKI-DO*=Copper melted bar.

1st.—Roasting the ore.

The coarsely powdered ore is calcined in a broad loamy furnace of about 25 metr. in length and 12 metr. in breadth. The furnace is covered with a shed, and, near to the bottom of it, has many openings for the entrance of the air. On the bottom of this furnace a layer of dry wood is placed, then a layer of ore, and thus alternately wood and ore till there are five double layers. Fire is then placed below, and the whole left for a period of 20-25 days. Part of the sulphide of iron is converted into sulphate of iron, by absorbing oxygen at the beginning of the roasting, and this sulphate is afterwards decomposed by a higher temperature, evolving sulphurous acid and leaving oxide of iron. A very small portion of the sulphide of copper is also converted into oxide of copper, so that the

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ronsted ore consists actually of a mixture of oxide and sulphide of copper with oxide and sulphide of iron. During the roasting of the ore dense white fumes constantly escape from the furnace. The Japanese are rightly afraid of this poisonous 'copper smoke,' and very seldom resort to the place where the copper is burning, so long as they perceive it. It contains arsenious acid, antimonous oxide, sulphurous acid, sulphuric acid &c., all more or less poisonous substances, which have an intensely destructive effect upon the vegetation of the neighbourhood. When the fire is extinguished and the furnace cooled, the coarse copper slag is taken away to be powdered and to undergo the second operation. In the powdered state it is called *Kudzu*. It will be remarked that the roasting process of the Japanese is very rough, and constitutes one of the reasons why they do not obtain as much metal out of their ore as would be possible with a better system of furnaces.

2nd.—Fusion (with silica) of the hearth-ash to obtain coarse metal (Kawado).

The roasted slag is sometimes mixed with loam or silica containing stone, if the original ore does not already contain a sufficient quantity of quartz or siliceous stone. The whole is exposed to a much stronger charcoal fire in order to get the slag fused. The small quantity of oxide of copper in the roasted slag acts upon the sulphide of iron still present in the ore, forming sulphide of copper and oxide of iron. The quantity of oxide of copper in the roast slag is, however, too small to decompose the whole of the sulphide of iron. This excess of the sulphide of iron now combines with the sulphide of copper to form a fusible compound which separates itself from the slag and runs to the bottom of the furnace. The oxide of iron combines with siliceous acid and forms a slag.

The furnace for this operation is small and has a peculiar thick round bottom in which a round cavity is made. This cavity is surmounted by a square chimney of bamboo and loam. The chimney is open on two sides up to a height of 3-4 feet, and closed on the two other sides like ordinary forging hearths. The hearth and cavity (crucible) are formed of a mixture of fire-proof clay, charcoal and buck-ashes. The tube of a pair of bellows is inserted into one of the sides of the furnace at some small distance above the bottom. The powdered roast slag, either mixed or not with loam or silica, is put into this furnace on the ash-earth, the whole covered with charcoal, and heated until the mass is in a state of fusion. The melted black metal, consisting chiefly of sulphide of iron with sulphide of copper is received in the cavity at the bottom. From time to time the siliceous iron slag is removed from the surface of the molten metal, the coarse metal is cooled superficially by a little water and taken out of the cavity in the form of discs. In this state it is named *Kawado* or sheave copper.

3rd.—Calcination of the coarse metal, fusion with a clay covering, and expulsion of sulphur as sulphurous acid, in order to obtain blistered copper, (Arido.)

The coarse metal of the former operation is now placed with charcoal into cavities (thick crucibles) of fire-proof clay fixed in the bottom of a furnace with square chimneys similar to that already described, and heated. A strong current of air is then directed upon the metal, and the latter is stirred with an iron rod to facilitate the oxidization of the remaining parts of the iron sulphide. The cavity is then covered with a thick plate, made from fire-proof clay and sand. The joints are plastered with a mixture of clay and buck-ashes, and, after drying, the whole is heated strongly. The remainder of the iron is absorbed as oxide by the slag, the latter being produced by the clay and buck-ashes of the covering plate and cavity. The temperature is raised gradually until the heat is as intense as possible and the metal commences—as the Japanese say—"to boil." This 'boiling' is caused by the action of oxide of copper upon sulphide of copper in a strong heat. By this action metallic copper and sulphurous acid gas are formed, the latter escaping with violent ebullition from the molten mass. After the ebullition, the temperature is again raised to ensure the complete separation of the copper from the slag. The metal is finally cooled with a little water and taken out of the cavity in the form of sheaves. It bears the name *Ara-*

do=crude copper (*Engl.* blistered copper: *Germ.* schwarz-kupfer) and is now carried from the melting place into the refinery.

4th.—Refining to obtain dry copper (gaar-kupfer) (Mabuki-do).

The two following operations were formerly practised at the Government Refinery at Osaka only; but are now common in all the provinces.

The blistered copper obtained by the foregoing process, still contains some quantity of iron, sulphur and a small proportion of tin, lead, arsenic, &c. To remove all these impurities about 150 grammes of the metal are placed in cavities of fire-proof clay made in the hearth of a small furnace similar to that already described, the whole is covered with charcoal and air is allowed to pass over the surface of the melted copper. By these means small quantities of iron, tin, and also of copper are oxidized, and form with the siliceous acid of the hearth or ashes a slag which floats upon the surface of the melted copper. At the same time any remaining traces of sulphur are removed as sulphurous acid. The slag is constantly removed with long iron ladles until the surface of the metal remains pure. Finally, a little water is thrown upon it to produce the solidity of the upper portion, so that a sheave of copper may be taken out of the cavity. This is repeated until the crucible is empty. The cakes of dry copper thus obtained still contain an excess of cuprous oxide which is removed in the following manner. In the stage last described it is called by the Japanese *MA-BUKI-DO*="often melted copper" (*Gauz-kupfer*).

5th.—Casting the bar copper, (Tough copper (Saö-buki-do).

In order to obtain the fine Japanese bar copper, which has a just reputation for its purity, the dry copper of the former process is smelted in quantities of from 30 to 35 kilos in loose crucibles of fire-proof clay. The copper is covered with pure charcoal in order to reduce the small quantity of sub-oxide of copper contained in the dry copper. This portion of sub-oxide makes the copper brittle and must therefore be partly at least removed if copper of great tenacity is required. The whole of the cuprous oxide is not to be removed because copper which is perfectly free from the sub-oxide does not possess the maximum of toughness, a fact which the copper smelters in England fully recognize, taking the greatest care to avoid 'underpoled' as well as 'overpoled' copper. When the metal is liquefied and all the impurities have been carefully removed from the surface, it is cast in iron moulds which are divided in 10-12 bar-forms, or sometimes also into square cakes. These moulds are placed in warm water and are then filled with liquid metal. As soon as the bars or plates are solidified, they are taken out of the moulds with a pair of pincers and immediately put for a short time into the vapour of boiling-water. By this means—which is not resorted to in Europe*—the copper bars or plates assume the beautiful high red colour characteristic of Japanese bar copper. It now bears the name of *Saö-buki-do*, i.e. copper melted in bars. If the roasting has not been sufficient, there remain some traces of arsenic in the bar copper which make it brittle and greatly depreciate its commercial value. If the copper ore—as is the case with many kinds of copper pyrites and grey copper ore—contains enough gold or silver, the coarse metal obtained from the second operation is worked in another manner in the refineries. We will describe the process of separation of these precious metals which consists of a *liquidation-process* as in the metallurgy of silver.

(To be continued.)

* In Europe a very small admixture of lead is sometimes used in order to obtain a fine red colour for the bars or plates.

TAKAO, AND THE PRINCE OF SENDAI.

Rises the moon in beauty brave,
And shines with silver beam,
Reflected in the tossing wave
Like life in troubled dream.

Yet not less wild and sad and strange
Than fevered dream can show,
The crimes that like dark demons range
Through countless lives below:

With listless hands the light winds bear,
In boat across the tide,
The prince of Sendai, and, most fair,
A maiden by his side.

Sweet her young face in rosy rest,
Such tint no blossom yields;
And warm, and soft, and white her breast
As cotton in the fields.

While mirrored in her lustrous eyes
Her gentle thoughts are shown,
As stainless as the morning skies
When night's last cloud has flown.

Her songs have ceased, and on her knee
The *sunisen* lies dumb;
Her dark eyes rest upon the sea;
Glad fancies go and come.

But the proud prince, with sudden thrill,
Feels wildest passion burn,
And, past the sentries of his will,
Slip words too swift to turn:

"My ways are on the mountains high,
"Yours through the woodlands sweet;
"Yet far away the sea and sky
"Alone may melt and meet."

"No modest maid feels shame's fierce glow
"When famous prince is won;
"No simple flower need blush to show
"Its sweetness to the sun."

Trembling she says, with bright eyes wide,
And blush that comes and goes,
Like flower upon a foamy tide,
Or morn on mountain snows:

"Long have I loved my own true love:
"My thoughts towards him flow
"As rivers from the hills above
"Rush to the seas below."

"While Hope's fresh breeze blows swift and strong,
"And we still girl and boy,
"My life with his will glide along
"In deep delicious joy."

"As moonlight gathers round the earth,
"When night comes drear and dim,
"So, when our days are void of mirth,
"My care will comfort him."

"Alas! mine is a poor slight heart
"That holds no more than one,
"But him, through smiles and tears that start,
"I'll love till life be done."

She turns her from his lustful look
To where above the sands,
Upon the cliff, in sheltered nook,
A tiny dwelling stands.

She fancies she can see the form
Her faithful heart holds dear,
And on her cheek, in blinding storm,
Drops many a burning tear.

Watched the prince her wandering gaze:
There shine his castle towers,
And there, lit by the same bright rays,
The hut among the flowers.

Love unrequited turns to hate:
With angry voice he cries
"And must the lord of Sendai wait
"Till changeful maiden sighs?"

"Heaven smite thy witless, beardless boy!
"By yonder shining star,
"If he would taste his promised joy,
"He needs must follow far."

He draws his dagger, holds it high,
Then drives it in her breast;
One piercing cry: one moaning sigh:
Her troubled heart has rest.

He casts her where the waters pour;
Their white teeth close above
The sweetest maid on Oshiu's shore,
Shimada's darling love.

O prince of Sendai, thou hast wrought
A deed beneath the moon
Should make it, to thy guilty thought,
With hate and horror swoon.

Well may thy life's flame turn to ash!
Well may thy pulses fail!
Beware the lightning's ruthless flash!
Beware the rising gale!

Deep are the crimsoned waves that roll
Above their piteous prize,
But deeper on thy dastard soul
Heaven's blackest vengeance lies.

KAJIN.

THE ST. ANDREW'S DINNER.

At 7 o'clock yesterday evening a number of gentlemen assembled at the Grand Hotel to do honour to the hospitable call of a Committee of the Scottish Residents of this settlement, whose invitation to celebrate, according to national custom, the feast of the Patron Saint of Scotland had been issued last week. The President of the Committee, W. W. Cargill, Esq., took the chair, having on his right Sir Harry Parkes, H. B. M. Minister, and on his left Colonel Richards C. B. Commanding the Battalion of Marines stationed here. To the right of Sir Harry Parkes sat Mr. Campbell of Islay the possessor of one of the best known names among the untitled nobility of Scotland. The entertainment was served in the large dining room of the establishment, and, if the menu, written in a tongue not "easily understood" of an Englishman, may be trusted, the dinner consisted much of national dishes, whereof any enumeration, with that accuracy which is demanded alike by a bill of fare and a page of history is not easy.

On the removal of the cloth, or at a period of the entertainment answering to it, the Chairman rose and bade a cordial and gracious welcome to the assembled guests, and immediately afterwards proposed the health of Her most Gracious Majesty the Queen, which was received with feelings of loyalty and enthusiasm by every one present. To this succeeded the toast of The Prince of Wales, as Duke of Rothesay, the Princess of Wales and the Royal Family. The Army and Navy followed, in response to which Colonel Richards, after touching on some of the remarks made by the Chairman, spoke of the higher professional education among the officers of the Army which the changes of late years had necessitated and brought about, and the increase of that individuality among the rank and file which had been one of the marked features of modern military legislation.

The Chairman then proposed "the Diplomatic Service," coupling the toast with the name of Sir Harry Parkes, and alluding with appreciative warmth to the important illustration of the services which may be rendered by diplomacy furnished by recent events in China.

Sir Harry Parkes, in reply, expressed with warmth a sense of the pleasure and satisfaction given him by the course adopted by his valued and distinguished friend and colleague in

China, and the gratification felt by himself and those in the service he had the honour to represent to find that their labours were alike useful and appreciated.

The toast of "The Pious Memory of St. Andrew" followed, in giving which the chairman, who had been genially rallied by Colonel Richards on the obscurity which hung over the Saint's history and labours—an obscurity in no wise dispelled last year when the subject was touched upon—dilated somewhat upon these, but perhaps rather surrounded them with a luminous haze than reduced them to any clear definition. The subject perhaps did not admit of much more than this Turneresque effect, although, subsequently, the Rev. Mr. Syle pointed out the historical traces left by the Saint's work and alluded to the relics, which the piety of the Scotch had collected in his honour. The toast was received with appropriate and reverent silence.

The "Land O'Gales" was then proposed by the Vice-President.

Mr. Dodds, dilated on the claims Scotland has upon the love and loyal feelings of her sons—feelings which were amply evinced in the reception accorded to the toast.

The Chairman then proposed "The Emperor of Japan and the Land we live in," a toast which was cordially drunk with becoming honours. Mr. Campbell of Islay followed with a song singularly characteristic of the national music of Scotland, not as known, indeed, to the majority of Englishmen, but as found in those glens and fastnesses of the country which have contributed so much to preserve the art of music in Scotland in a form wholly unknown in any other part of the world. Though sung in Gaelic, the native tongue of the Celts, this song was interesting in a high degree to every one who could recognize in its peculiar tones the genius of the interesting people whose deep emotions it so curiously reflected.

Mr. Ness, in a lively and highly appreciative speech, then proposed "The Lassies," and the toast was responded to with equal warmth by Mr. Drummond Hay.

The Chairman then gave "the Literature, Science, and Art of Scotland," and placed the acknowledgment of the toast in the hands of Mr. Principal Dyer, of the Kogakurio. Mr. Dyer expatiated fully upon the services rendered to the world in these departments of human knowledge and effort, by the great Scotchmen whose names he enumerated, and showed how great were the claims of the Scotch in this regard upon the respect and admiration of the world.

"The Bench and the Bar" was proposed by Mr. J. Fraser, who dilated upon the gratitude Britons have cause to feel for an administration of justice by men unsurpassed in no age of the world's history for integrity, learning and the graces of life.

Mr. Marks, regretting the absence of Assistant-Judge Goodwin, and some of his Brothers at the Bar, returned thanks.

"The Press" was then proposed by the Vice-President. Mr. Howell, in reply, said a few words upon the responsibilities which seemed specially to attach to the Press in this country, in view of the now and difficult course the mind of the nation was pursuing, and hoped that while its errors might be clearly pointed out, encouragement might also be given to it to persevere in this course.

In reply to the toast of "The Guests," proposed by Mr. Brunton, Mr. Campbell returned thanks, and expressed the delight and astonishment he had received from his visit to this country, the remarkable progress of which was one of the most extraordinary features of the Asiatic history of this century.

Mr. Wylie then proposed the health of the Chairman. He playfully alluded to the position Japan had taken up on the Stock Exchange in London, the rough though true test of her progress and aspirations, and dwelt on the connection of the Chairman with the powerful Corporation he more or less represented and with the railways which were doing so much to revolutionize the mind of this country. He said that the name of Cargill was not only historical in Scotland, but in one of the most flourishing colonies in the world, New Zealand, and made a happy point in expressing his conviction that when Macaulay's New Zealander should come to the fallen metropolis of Great Britain and sketch the ruins of St. Paul's from one of the broken arches of London Bridge, his name would be

found to be that of the Chairman. Another song was sung by Mr. Campbell of Islay, and one by Mr. Pearson, and the Chairman rose and bade his assembled guests goodnight with a few kindly words upon the good feeling and fellowship which had brought them together and which he trusted would continue to pervade all their relations with each other and those around them. The assembly then broke up.

Law & Police.

H. B. M.'s PROVINCIAL COURT.

Before C. W. GOODWIN, Esq., *Assistant Judge.*

December 3rd, 1874.

KAWAGUCHI KAMAKITCHI vs E. WALLACE.

The plaintiff in this case claimed for a breach of contract by defendant to deliver 375 needle guns at \$5.00. The plaintiff was not represented; Mr. Marks appeared for the defendant.

In opening proceedings Mr. Marks applied that security for costs should be lodged by the plaintiff in accordance with the rule to that effect. His Honour, however, stated that in view of the plaintiff being Japanese he could not call upon him to furnish security. He also pointed out that under the treaty the Japanese were entitled to receive every assistance in obtaining justice from foreigners. Mr. Marks, however, contended that by the Order in Council the Court had no option in the matter.

His Honour dissented.

Mr. Marks requested that note should be taken of his objection.

It appeared from the evidence that plaintiff had, in the month of August last, contracted to purchase 375 needle guns from the defendant at the rate of \$5 per gun, without cartridges, and that he paid 100 *riyos* earnest money. He applied to take possession of the guns, on the 6th, 7th, 8th, and, finally, the 11th August, when he was told that the guns were not in possession of the defendant. He again applied on the 20th instant, and was told that the guns could not be had for less than \$7.50 each. On the 28th August the guns were undelivered.

Cross-examined, the defendant said that he dealt in arms and had had a previous transaction with the defendant. He had made no contract for powder on the 12th August with him. The document which was produced was merely a memorandum about gunpowder. He had a purchaser in view for the guns.

Edward Wallace stated that in July he had paid the plaintiff brokerage of \$100 on 100 Remington guns sold by him. He saw him several times in reference to some other guns which he wished him to sell and told him that failing a better offer he would accept \$5 for them. On that occasion he gave him the \$100 brokerage on the rifles he had already sold and entered into an agreement to give him 100 *riyos* on the sale of the needle guns. Plaintiff came for them on the 8th August and having heard that he had obtained \$8 for them declined to deliver them. Plaintiff came on the 12th and he then contracted to supply powder for 60,000 cartridges on which he would receive a brokerage of \$50. This contract broke down. On the 22nd August, the plaintiff admitted that he had sold the rifles at \$8 and witness then offered them to him at \$7.50 and he agreed to take them at this price. He has not done so. Witness has been prepared to deliver.

W. P. Mitchell corroborated the latter portion of the defendant's statement, having been present on the occasion referred to. The plaintiff agreed to pay \$7.50 per gun, and said he would arrange at Yedo about taking them.

Mr. Marks, in summing up, contended that the plaintiff was merely an agent, employed by the defendant to get him the best price for his guns. His client had offered to sell at \$5, if no better price were obtainable; but when he discovered that the broker was to receive \$8.00 he declined to do so unless he was paid \$7.50. Apart from this, moreover, a new contract had been made which rendered the old one void.

His Honour said that the contract was in writing and could not be superseded by a verbal arrangement. He would consider the case and reserve his decision.

A. G. Thompson was charged with being drunk on Wednesday evening at 8 o'clock, and assaulting the police.

Accused pleaded not guilty to both charges.

From the evidence adduced, it appeared that accused had interfered with a Japanese baker, and that when a French policeman remonstrated with him, he struck the policeman. Police-constable Carter was also assaulted by accused whilst assisting the French police to arrest him.

His Honor fined accused \$10 for the assault, and said that he had evidently been in a row, and had assaulted the police. It did not matter whether the accused was under the influence of liquor or not, the fact of the disturbance and the assault remained the same.—*Hard.*

Before C. W. GOODWIN, Esq., Assistant-Judge.

November 4th, 1874.

LANE, CRAWFORD & CO. vs. Capt. J. WYNN.

This was a claim for \$556 for goods supplied.

Mr F. Townley appeared for plaintiffs, sworn.—I am a partner in Lane, Crawford & Co.'s. I supplied the goods; they were supplied to my knowledge. The account presented is quite correct. The goods were supplied in 1873.

His Honour.—The account is dated 1872.

Witness—I have no exact recollection of the date, it is so long since, but I know it is correct. It is our custom to present bills monthly. The account has been presented at different times to defendant. The accounts were sent in receipted, I believe. It is our rule.

His Honour thought it an objectionable plan.

Witness said. It is the custom. [A number of receipted bills were handed into Court.] Capt. Wynn came to my office in May last, and said:—"I am aware the accounts have never been paid, but thought that you looked to Mr. Smith for payment." Mr. Smith was, or had been, a partner in the firm of J. Wynn & Co. Our firm agreed to let the account stand, on a promise from Capt. Wynn, who had got employment, that he would pay off the debt by monthly instalments. I don't recollect the date they gave up business. We were to receive the instalments through Mr. Smith, but none of them have ever reached us. The debt was never under discussion. Capt. Wynn has been to sea for long intervals, so we have not been able to see him often. We never released Capt. Wynn from his responsibility in regard to the debt.

To defendant: You have paid several bills since then. I don't know why our firm did not send in the claim to Cheshire & Co. when you advertised for all claims to be sent in.

J. H. Smith, sworn: I am a merchant. I was in partnership with Capt. Wynn. I recollect the bills in question. The bills were sent in before we ceased to do business. By Capt. Wynn's own arrangement he told me to go to plaintiffs and ask them to allow them to stand. I did so, and Captain Wynn then got command of a steamer, and he was to save so much of his salary towards paying off that debt and some others. That has been going on ever since. I have spoken to Capt. Wynn several times about it. I have never paid any money on that account yet. Capt. Wynn had the entire management of our business.

His Honour.—That does not remove your liability.

Witness continued: To the best of my knowledge the bills have not been paid.

To defendant: \$83.25 has been paid on my account to Lane, Crawford & Co.

Witness to Court: That has nothing to do with this account.

To defendant: I never said that they debited me with the account.

To Mr. Townley: Some goods were consigned to me, and I handed them over to you for disposal and remittance to the owners.

Captain J. Wynn, sworn: I am captain of the steamer *Bekar*. In September, 1872, I received a sealed envelope from plaintiffs, enclosing the two receipts just produced. I asked the man who brought it (plaintiff's compradore) about it, and he said he was ordered to leave them (the accounts). I then went to plaintiffs, knowing that I had not paid them, and Mr. Wilson, in plaintiffs', told me they had settled the accounts with Mr. J. H. Smith. I have retained the accounts since then, and have heard nothing till the present about the affair. I have been in and out of plaintiffs' store often of late, and have paid them several accounts since then. If I had been indebted to plaintiffs, it is but natural that they would have spoken to me about it.

To Mr. Townley: I received the goods, but I never paid the money; my partner did.

To Court: I never made any arrangement with plaintiffs in regard to paying the bill by instalments. I always thought the bill was paid.

His Honour ordered plaintiff's books to be produced.

To Mr. Townley: I never said the accounts had not been paid. It was arranged that Mr. J. H. Smith should pay.

To Court: When I say it was arranged that Mr. Smith should pay the bills I mean that Mr. Wilson, of plaintiffs', told me so.

J. H. Smith, re-called: The sole reason that it was passed to my account in plaintiffs' books was to close Wynn & Co.'s account, as that business was closed, and on his promising faithfully to pay the account. He promised that to me. Captain Wynn was to save \$100 or \$150 a month, and pay it to me, so that I could pay plaintiff's claim against Wynn & Co., which had been transferred to my account.

His Honour said he thought that J. H. Smith was plaintiff's debtor, and not defendant.

Mr. Townley said it was a gross mistake that their bookkeeper had sent defendant receipts.

His Honour said it could hardly be called a mistake. Mr. Wilson knew what he was about at the time.

Mr. Townley wanted to adjourn the case till Mr. Wilson's arrival from England. There was a distinct understanding that Capt. Wynn was to pay in instalments.

His Honour adjourned the case till the return of Mr. Wilson, as he seemed to have conducted the affair.

Mr. Townley said he expected him early in January.—*Herald*

II. B. M.'S CONSULAR COURT.

Before H. S. WILKINSON, Esq., Vice-Consul

December 1st, 1874.

C. E. RAYMOND vs. G. T. M. PURVIS.

Claim for \$43 for work and materials

Plea, "Never indebted."

C. E. Raymond, sworn: Mr. Purvis engaged me to do some work for him. It was to paint his lamps (outside), and a sign-board. I did the job for him. The letters were two feet in length on the sign. I sent him my bill, but he would not pay it. Mr. Purvis told me it was all right when I had finished it. The price agreed on was \$35. There was no agreement as to the price of the lamps. The sign consists of the word "Occidental," in two-foot letters—gilt. It is fastened up with iron-work. I put "Occidental" in six places on the lamps.

Cross-examined by defendant:—The price agreed on was \$35. You looked at the work when it was finished, and said it was all right. It was properly done. I sent you the bill. It ought to last three months, but I would not be surprised if it turned "green" in ten days.

To Court:—I went many times to present the bill, but never could find defendant.

G. T. M. Purvis, sworn:—Sometime last month Mr. Raymond came to the Hotel asking work. I engaged him to do the lamps. No price was fixed. The \$8 is not a matter of dispute. The sign was to be painted black, and sanded and gilt. The sum was \$30. He put it up, and when I looked at it, it was very much scratched, and it did not appear to be gilt. It now looks green. It is not done according to contract. It is not sanded.

Cross-examined by plaintiff: There was no witness to our contract about "sanding" the sign.

H. W. Messenger, sworn: I live in the Occidental Hotel. I saw plaintiff working on the sign. He told me it was going to be sanded. It is not properly gilt. I have seen many properly done signs. I should say it was bronze. I know nothing about the price. It looks as if it had been up a year or two.

Cross-examined by plaintiff: I was not present when the contract was made.

Plaintiff, recalled, to Court: I have seen the sign lately; it does not look so bad. It was gilt. It was the best I could get here.

His Honour gave a verdict for \$38 and costs.

H. A. XAVIER vs. A. PLUMMER.

This was a claim for balance of wages \$38.75.

Plaintiff, sworn: Said I live in Yedo. On the 22nd September Mr. Plummer dissolved partnership with Mr. Blockley. I told defendant that the firm owed me \$45 for wages. He said, "All right." In the early part of October I drew \$30, \$5, and \$1.25. I gave notice to leave on the 16th October. I had a dispute about what was due to me.

A. Plummer, sworn: I am willing to pay \$1.75, balance due to plaintiff.

By advice, plaintiff withdrew his case, defendant agreeing to pay amount claimed.—*Herald*.

THE TRANSIT OF VENUS.

(Times of the 6th April).

In the course of the next four or five months, several Government expeditions, very carefully prepared and equipped, will start from the Royal Observatory at Greenwich for remote parts of the globe, in order to observe the transit, or passage across the sun's face, of the planet Venus, early in December next. In preparation for this enterprise, a staff of astronomers and photographers, composed of officers of the Naval and Military services, with a sprinkling of civilians, have been working at the Observatory for some months, under the guidance of Sir George Airy and his assistants, practising themselves in the complicated observations and other delicate processes which will be required of them, and upon the proper accomplishment of which so much that is important in astronomy depends. Few subjects of a scientific kind have excited so much public interest and discussion as this one of the approaching Transit. In itself, the grand problem of the accurate determination of our distance from the sun, and thence of the distances of the planetary bodies and of those few of the fixed stars whose remoteness can be gauged at all by any means yet known to science, must have attractions for every intelligent mind. The interest and curiosity naturally appertaining to the question have been, moreover, not a little stimulated on this occasion by the articles and letters on the general subject of the Transit which have been published during the last year in our own columns and elsewhere. Enough certainly, has been told to whet the appetite of the public for the further details. For the information, therefore, of those of our readers who cannot go to Greenwich and learn these things for themselves, we purpose giving some account of the energetic and complete arrangements which England and other countries are now making for the observation of one of the most rare and scientifically valuable of celestial phenomena.

Probably most persons are aware by this time that of the three or four different methods by which the Transit may be observed the one known as Delisle's is that on which England, in common with the majority of the other nations taking part in the work, will place chief reliance on the coming occasion. Due regard will be given to the use of the Halleyan method as well at those points where the whole Transit will be visible, as will be the case at all of our southern stations; but the Astronomer Royal's choice of stations has mainly been made on the basis of their suitability for the method of Delisle. Briefly and popularly, this consists in the accurate determination of the interval of time which elapses between the moment when some instantaneous phase of the Transit is seen from one point on the earth, and that at which the corresponding phase is seen from another point far distant from the first, a necessary condition being that this time-interval shall be as great as circumstances will admit of. The two phases most suitable for observation are,—firstly, the apparent entry or "ingress" of the planet on the sun's surface, and, secondly, her departure or "egress" from it; and the critical moments to be seized are, in the first case, those at which, from different stations, the planet's hinder edge, or "following limb," is seen exactly in contact with the sun's edge on one side; and, in the second case, that at which, from other stations, her advanced edge, or "preceding limb," is similarly seen in contact on the opposite side. In other words, they are the first and last moments, respectively, at which, from the several points, the whole disc of the planet is seen just within the sun's rim. A crown-piece laid on a large round table, touching its edge, first on the left hand and then on the right, will serve to illustrate the above phases, which are called those of "interior contact" at ingress and egress respectively.

That the reader may now understand something of the conditions which govern the choice of stations, let him conceive a plane to pass through the centres of the earth and sun, and through the centre of Venus at the moment when she first arrives within a conical surface similarly imagined to envelope the circumferences of the earth and sun. This plane will evidently cut the edge of the illuminated half of the earth in two points diametrically apart. And since Venus, moving faster than the earth, crosses the sun's face from east to west, it is also evident that an observer placed at the eastern extremity of this diameter will witness her ingress sooner than he would from any other point on the globe; while an observer at the opposite or western end will sensibly be the last to see it—neglecting, for the sake of brevity, the slight change introduced by the earth's axial rotation, and by her own and Venus's proper motions in the interval, none of which, however, may be overlooked in practice. The one would see the interior contact at ingress "most accelerated;" the other the same phase "most retarded."

Geometrically, therefore, these would be the best points for a pair of observations of the ingress. But, as this ingress has to be observed from the two stations at nearly the same time—for the interval between the most accelerated and most retarded ingress in the coming Transit will be only some 25 minutes—it follows, from the nature of the case, that to each of the two observers, thus situated 180 degrees apart from one another, the sun will be but barely above the horizon at the critical moments. To the eastern observer it will be just sunset, to the western one just sunrise. But inasmuch as it is a necessary condition, consequent on the distortion of the sun's image at very low altitudes, that it should be not less than about 10 degrees above the horizon, our observers must be placed at points somewhat nearer together than a full diameter of the earth. The best points for observation of the egress also are determined on exactly similar principles. In every case, however, the theoretical conditions are, of course, limited in practice by the possibility of finding land near the desired spots which can be reached and occupied with safety by the observing parties; the observations, to be trustworthy, can only be made on *terra firma*. It may be worthy of remark, with respect to the last matter, that the Astronomer Royal, and those who act with him, determined, at the outset not to attempt to send expeditions to points destitute both of inhabitants and anchorage, though they were willing to put up with the absence of either the one or the other singly, as, indeed, is shown in the case of three of the stations already chosen. We must not omit to mention, lastly, that the prospects of fine weather at the season of the Transit have also to be taken into account in the choice of stations.

Supposing, now, that the absolute time-interval between a pair of observations of accelerated and retarded ingress or egress, as the case may be, has been ascertained, as well as the distance separating the two stations, and remembering also that the relative distances of the Earth and Venus from the sun and their heliocentric angular velocities are already exactly known, we have at once, by simple geometry, the chief data necessary for the computation of the sun's distance, though the actual reduction, atmospheric refraction, and other causes, with cannot be dwelt upon here.

Guided by conditions such as we have indicated, the Astronomer Royal has chosen five principal and three subsidiary stations for our share in the enterprise. Honolulu will be the chief station for observing the accelerated ingress, and it will be strengthened by secondary stations at two other points, probably Hawaii and Atooi, in the Sandwich Islands. The retarded ingress will be observed at Rodriguez Island near the Mauritius, and at Christmas Harbour in Kerguelen Land (sometimes called the "Island of Desolation"), in the Southern Ocean; with a station auxiliary to the latter at some second point on the same island. Lastly, Christchurch (New Zealand) and Alexandria will pair together for the accelerated and retarded egress, supported by independent observations which will be made in Australia and Northern India. As Delislean stations, all of the above are excellent. For Halley's method, Kerguelen and its satellite, though not of first-class value, are good, probably the best practicable, southern stations; Christchurch and Rodriguez are of inferior value in this respect; and the rest are excluded, the whole Transit not being visible from them. Parties, each consisting of a chief astronomer in charge, at least one solar photographer, and from one to three or four assistant astronomers, will be sent to the five principal stations. There will also be attached to each party two or three sapper photographers from the Royal Engineers, a number of whom have been under instruction at Chatham by Captain Abney, R.E., in the use of the photoheliograph and the manipulation of sun-pictures. Sir George Airy's arrangements for the personal staff are not yet complete, but, so far as is decided at present, Captain Tupper, R.M.A., a well-known member of the Astronomical Society, will conduct the Honolulu party, and will be accompanied by Professor George Forbes, of the Andersonian University, Glasgow, and others. Lieutenant Neate, R.N., is nominated as chief for Rodriguez; and the Rev. S. J. Perry fills the corresponding office for Kerguelen. The stations subsidiary to Honolulu and Kerguelen will be served by detachments from the main parties. Major Palmer, R.E., will have charge at Christchurch, and Captain Ord Browne (late R.A.) at Alexandria; Lieutenant Darwin, R.E., and Captain Abney, R.E., respectively undertaking the photographic work at these two places. At the outset of the enterprise, several full-pay officers of Artillery and Engineers, nearly sufficient in number for the entire staff, and all of them more or less qualified by previous knowledge, volunteered to take part in it, and we believe that Sir George Airy was anxious to avail himself of the services of a class of observers whom experience had shown to be well fitted for work of the kind. But at this point the Admiralty or the War

Office, or both together, failed him. With the three exceptions we have named, the services of these officers were refused, on the score of expense, and as an alternative a call was made for volunteers from officers of the Royal Navy. Fortunately, men of energy and ability responded to this appeal, and have since applied themselves to the work with a zeal and industry which give the best possible promise of success.

In the preparation and equipment of the Transit party, the vigilant forethought of the Astronomer Royal seems never to have relaxed. Not only is the instrumental outfit probably the largest and most perfect of its kind which has ever been brought together, but even in respect of those minute details which contribute so much to accuracy and success in an enterprise of this kind, nothing seems to have been forgotten or neglected. When we mention, for example, that, in addition to the countless other duties of his arduous office, Sir George Airy has contrived to give his personal attention to such matters as designing the portable observatories for the various instruments, and devising the best positions for the doors and windows of the photoheliograph huts and "dark rooms," according to the different latitudes and different hours of the day for which they will be required, some idea may be formed of the amount of work which has fallen upon him, and of the thoughtful care with which the practical details have been planned and executed.

Besides such smaller items of equipment as detached telescopes, portable transit instruments, telegraphic apparatus, compasses, chronometers, barometers, &c., four chief instruments, each with its portable observatory, solid stone platform, astronomical clock, and other necessary gear, will be sent to all the principal stations. First in order come the Transit instruments, of forty inches focal length and three inches aperture, mounted on massive stone piers. These will be used for finding time by the transits of stars, and longitude by transits of the moon. We have seen that it is an essential condition of Delisle's method that the *relative* time at any pair of stations shall be exactly known. Astronomers adopt Greenwich time as the absolute standard of comparison for this purpose. But, as Greenwich time cannot be carried accurately all over the world, it is inferred at distant places from the local time combined with the supposed longitude. Alexandria is the only one of our Transit stations the longitude of which can as yet be determined by telegraphic signals. At the rest it will be necessary to find absolute longitude by observations of the moon. This is a task requiring time and trouble, since, to get a sufficiently accurate determination, about 150 observations, extending over some months, will be needed. In order that these longitude observations may be multiplied as quickly as possible (and for the determination also of latitude), each party will take out a large azimuth instrument, or vertical circle, with which azimuths or zenith distances of the moon may be observed in any part of the heavens. The five instruments, as well as the Transit instruments, have been made expressly for the expeditions by Messrs. Troughton and Simms. Such are the modern refinements of observation and theory that it is hoped that, by a combination of altazimuth and transit observations, Greenwich time will ultimately be known at each observatory to within about a single second, though, as astronomers will know, to obtain so accurate a result as this is a matter of very great difficulty. The determination of latitude will be much simpler, for, in this case, the error, after a week or two's work, is not likely to exceed few feet.

We come now to the critical and most difficult point of all—that to which all the others are subsidiary—namely, the determination of the moment of the planet's first arrival within the sun's disc, or of her departure from it. For the eye observations of these phenomena, each station will be furnished with a telescope of six inches aperture, equatorially mounted, and driven by clockwork with such a speed as to remain steadily fixed on the sun after having been once pointed to it, thus leaving the observer the free use of his hands for other purposes. The famous "Lee" equatorial is one of the number, and will be sent to Alexandria. It might be thought a tolerably simple matter for an observer with a good and powerful telescope to detect the instant of true interior contact of the magnified discs of Venus and the sun. In reality, however, it is very far from easy. Owing to a perplexing optical phenomenon termed "irradiation," the bright sun appears too large and the dark planet too small. The effect of this is that for several seconds after Venus seems to have completed her ingress she presents a somewhat pear-shaped form, remaining apparently attached to the sun's edge by a dark band or ligament, which, from a breadth equal to between 1-10th and 1-20th of the planet's diameter, shrinks to a fine line, and ultimately breaks. Similar appearances, in reversed order, are

seen before apparent contact at egress. This ligament is now known generally to astronomers as the "black drop." It is the *cru*x of the contact observations, and presents some of the most baffling and formidable difficulties which mathematicians will have to deal with. By the hitherto accepted theory of irradiation, the instant of breaking or first formation of the black drop, according as ingress or egress is referred to, is sensibly the instant of true contact. But, by experiment, it is now found that this theory does not hold good, and that different telescopes give different results under circumstances in all respects the same; and that the differences vary in a most irregular and puzzling manner—though, as a rule, the larger and better the telescope and the duller the light, the less is the amount of irradiation and the earlier the breaking of the black drop. With the double purpose of investigating these matters and of finding at the same time the "personal equations" of the observers, Sir George Airy devised a model of the transit of Venus, which has been in working order at Greenwich for the last few months. In this, a "heli stat," or revolving mirror, is used to flash the sun's rays through an aperture in a black metal shield towards an observing station 400ft. beyond it, where the telescopes are erected. The edges of this aperture on either side are so constructed as to represent truly the curves of the sun's circumference at those parts where Venus will make her entry and exit, calculated for the given distance of 400ft.; and across the opening a plate of glass, carrying a metal disc, which is similarly proportioned to the size of the planet and placed properly in position with respect to the curves, is made to travel, by attachment to an astronomical clock, with a velocity corresponding to that which Venus will have at the time of Transit. This simple but most ingenious contrivance affords an excellent means of testing the properties of irradiation as exhibited by different telescopes, to different observers, and under varying conditions of sunlight. The mock Venus can be placed in actual contact with the mock sun, or at any number of seconds by the clock before or after contact; or the phases of ingress or egress may be allowed to transpire, just as in the real Transit. The several appearances seen in the telescopes at the observing station can then be registered and compared; they may also be photographed, for comparison of the phenomena imprinted on a photograph with those witnessed by the eye. A large number of such observations have already been made at Greenwich, by the very men who will ultimately be engaged in the more serious work of the real Transit. It is true that we are here dealing only with a short distance, a slightly diminished light, a mock sun, and a flat bit of metal instead of a globular planet surrounded by an atmosphere. Yet it is no less certain that the model exhibits phenomena very closely approximate to the true ones, and that in the hands of Sir George Airy seconded by Captain Tupmann whom he has intrusted with the management of all the details and calculations, this series of experiments will give results of very great value for the accurate reduction of the contact observations.

But the critical observation of the instant of true contact is, fortunately, not the only one which the observer will be able to depend upon. By means of a beautiful apparatus called the "double-image micrometer,"—also the invention of Sir George Airy—which may be briefly described as a four-glass erecting eye-piece, one lens of which (the third from the eye) is so constructed that two images of any object may be moved past one another over an angular distance measurable by a micrometer screw—he will be able, during five or six minutes before contact at ingress, or after contact at egress, to determine with accuracy the distances between the fine horns or "cusps" of light intervening between the dark body of Venus and the sun's circumference. Reverting to our former illustration of the crown-piece and round table, if any one will now place the coin just overlapping the edge of the table, he will understand what is meant by the cusps, and will see that, as the coin is gradually moved outwards or inwards, the distance between the cusps is accordingly increased or diminished. The double image micrometer can also be utilized when Venus is wholly on the sun for measuring the distance between her edge and the near edge of the sun, so long as that distance does not exceed her own diameter. In these two ways, a large number of very good measures of the planet's position on the sun's face will be obtained, irrespectively of the true contact; and as the exact time of each observation will be noted, it will be possible, by comparison of the measurements, to infer the time of contact with great precision from them alone, should this be necessary.

Solar photography will be largely employed during the transit as an auxiliary to the eye-observations, and results of extreme accuracy are anticipated from it. Five magnificent photoheliographs, one to each principal station, have been constructed for the occasion by Mr

Dallmeyer, with such exquisite refinement of scientific care and ingenuity that their optical properties may be pronounced the most perfect yet attained. The photographs taken by them will be free from all distortions and imperfections other than those which might possibly result from unequal contraction of the film, in the wet-collodion process, but which are totally inappreciable in practice, if, indeed, they exist at all. The technical processes best calculated to produce perfect pictures have also been very carefully considered by Dr Warren De La Rue, Captain Abney, and other eminent photographers. Such, in short, will be the mathematical precision and sharpness that they will be perfectly available for exact micrometric measurements of the minute and delicate differences of distance and position with which astronomers will be concerned in their subsequent investigations. Like the principal telescopes just now described, the photoheliographs are equatorially mounted, and carried along by clock-work with the same velocity as the sun. For the sake of popular explanation, they may be said to resemble large and powerful telescopes, fitted with a camera at the eye-end. Nearly in the primary focus of the object-glass is placed an instantaneous exposing shutter, held in position by a detent, which acts against a powerful spring attached to the telescope itself. A slit across this shutter, ordinarily about one tenth of an inch breadth, can be widened or contracted by an adjusting screw, to suit the intensity of the sunlight; and, on the release of the detent, a momentary flash, darting through the slit, and falling down, paints a four-inch picture of the sun on the sensitive collodion plate in a very small fraction of a second of time. In this way, sun-photographs may be taken, with great rapidity, at each stage of the transit, Venus appearing in the pictures as a black spot on the sun's face about one-eighth of an inch in diameter. But for the yet more rapid portraiture of the planet's changes of position at the critical phases of ingress and egress, use will be made of an ingenious apparatus known by the name of its inventor, M. Janssen. This consists of a device for exposing, at very short intervals, parts only of a rotating collodion plate along its outer edge. The pictures thus taken will be very small, comprising only that bit of the sun's rim across which Venus may be moving. This, however, is all that will be needed just then; and as 30 or 40 of these pictures will be taken in about two minutes, and the instant of each exposure be accurately noted, they will furnish the means of obtaining an exceedingly close approximation to the true moment of the breaking of the black drop. For the other stages of the transit, full-sized photographs will obviously be needed, so as to exhibit the sun's centre as a fixed referring-point for measurements. A series of such pictures taken at our southern stations, where the whole transit will be visible, will possess great value in connexion with the Hallayan method of observing the whole duration of Venus's passage. They may, indeed, be said to amount in principle to a modification of Hallay's method. For they will register, with consummate accuracy, from widely-separated stations, the positions of the chords described by the planet's centre across the sun's face, for comparison with the positions of those chords as determined by the method of durations. Those taken near the middle of the Transit will also afford a direct measure of the least distances between the centres of Venus and the sun, which is again another modification of the same method. In all these photographic operations it is likely that the dry-plate process will be chiefly employed, on account of its great simplicity and rapidity.

Lastly, it has been proposed by the eminent astronomer Father Secchi, of Rome, to utilize the exterior contacts of Venus and the sun, by means of a peculiar adaptation of the spectroscope, which enables the chromosphere or hydrogen stratum overlying the sun's photosphere to be seen at the same time as the photosphere itself, so that Venus's limb may appear projected on the chromosphere before it reaches the photosphere or ordinary telescopic limb of the sun; the planet's approach to, and first exterior contact with, the sun may thus be watched. Supplementary observations of this kind will probably be attempted by Captain Tupman at Honolulu, and by Lord Lindsay at Mauritius.

There is one excellent feature of the general arrangements which must not be left unnoticed. In the history of astronomical expeditions, few greater mistakes have been made than that of sending out observers deficient in practical knowledge of their work and their instruments. No apprehensions on this score need be felt on the present occasion. In building with their own hands the observatory-huts and foundation-piers, as well as in the erection, adjustment, and constant use in the best possible way of the identical instruments which they will take with them, and also in the reduction of their observations, the scientific staff have been undergoing a long and complicated drill, the practical value of which it would be difficult to

overstate. By means also of the model, they have been systematically exercised in the observation of the phenomena of the Transit, learning what they may expect to see, what precautions to take, and what points to note. In fact, so thoroughly do the expeditions start in the practical details of their work, that, if they are only favoured with clear skies during the momentous hours of the transit, we may count with confidence on entire success.

Nor will they be by any means alone in their interesting task. America and some of the chief States of Europe are making costly and elaborate preparations to co-operate. France will, it is understood, despatch observing parties to St. Paul Island, Amsterdam Islands, Campbell Island, and Marquesas Islands, in the southern hemisphere, and to Pekin and Yokohama, in the northern, and will also provide some secondary stations in one or two of her Colonies. Germany proposes to occupy Auckland Island, Macdonald Island, Bluff Harbour (New Zealand), and Mauritius in the south, and in the north a station in China or Japan, and a photographic station in Persia, on the line of the Indian telegraph. Of American plans little certain is yet known, but they will probably comprise the establishment of three or four stations—one of them at Macdonald Island—in the southern hemisphere, and as many in the northern. And Russia, strong in the advantage of having an immense adjacent tract of her own territory favourable for observations of the Transit, will equip, though on a more moderate scale than the other countries, no fewer than 27 stations between Odessa and Japan, 15 of which, distributed over Western Siberia and Eastern Russia, and round the Black and Caspian Seas, are well suited for Delislean observations of the retarded egress, while the rest are Hallayan stations, situated chiefly in Eastern Siberia and Tartary. At the stations we have above enumerated, eye-observations of contact, photography applied in two or three different ways, and the "direct" method of measuring with a heliometer the distances between the centres of Venus and the sun will be variously employed. Lastly, British India will be represented by a photographic station in the Punjab under the charge of Lieutenant-Colonel Tennant, R. E. Lord Lindsay, with the liberality in scientific matters for which he is distinguished, will take an admirably equipped private expedition to Mauritius; and our Colonies and Colonial Observatories are preparing to co-operate at suitable points. Altogether, there will be at least 70 or 80 stations, scattered over the illuminated side of the earth, from which, between the hours of about half-past 1 and half past 6, Greenwich time, on the morning of the 9th of December, a small army of astronomers will be anxiously scanning, measuring, and photographing the movements over the sun's face of the little black spot which is to afford us a solution of one of the sublimest problems of the universe.

It will be interesting to note, finally, what is likely to be the ultimate issue of this grand combined attack upon the problem of the sun's distance—or, to speak more technically, its "equatorial horizontal parallax," which is simply an astronomer's expression for the greatest angle which would be subtended by the earth's equatorial radius to an observer at the distance of the sun's centre whatever that distance may be taken to be. Without enumerating the eight or ten values of this solar parallax which have been obtained by modern astronomers, by various subtle and refined modes of theory, observation, and experiment, it will be enough to say that the most trustworthy determinations give an average value of about 8.92 sec. for the parallactic angle, corresponding to some 91,480,000 miles for the sun's distance—with an uncertainty of .08 sec., or, in round numbers, 300,000 miles. The Transit of Venus may not be the means of altering this quantity (8.92 sec.) by any large amount, but it will be of the utmost utility as a crucial test of previous results, being the only direct geometrical solution of the problem. Taking into account all probable errors of longitude, local time, photographic and contact observations, it may be assumed, on a by no means sanguine estimate, that the existing uncertainty will be reduced to one-third of its present amount, or to 0.1 sec.; but it is far from unlikely that the probable residual error will be no more than one-half of the latter quantity—that is to say, our distance from the sun will probably have been ascertained within 50,000 miles, or about 1-180th part of its whole amount. Of the higher scientific advantages of such a result we need hardly speak. But, for the information of those who would inquire as to its direct practical uses, it may be as well to explain that an accurate knowledge of the sun's distance is essential for the perfecting of the lunar and planetary tables, and therefore of the science of navigation, as well as for many other matters of practical importance, such as finding the true longitudes of places on the earth's surface, which depend on the accuracy of the Lunar Theory.

Shipping Intelligence.

ARRIVALS.

Nov. 29, *Volga*, French steamer, Nomideden, 956, from Hongkong, November 21st, Mails and General, to P. M. Co.
 Nov. 29, *Bellona*, German steamer, Schultz, 707, from Shanghai, November 21st, General, to P. M. S. S. Co.
 Nov. 29, *Pride of the Thames*, British barque, Brown, 379, from Nagasaki, November 21st, Coal, to P. M. S. S. Co.
 Nov. 30, *Tarlar*, German brig, Kaemann, 256, from Takow, 7th November, Sugar, to Chinese.
 Dec. 1, *Satua*, German barque, Oesau, 304, from Amoy, 10th November, Sugar, to Order.
 Dec. 2 *Glenearn*, British steamer, Auld, 1,370 tons, from Shanghai and Lon ton, General, Jardine, Matheson & Co.
 Dec. 2, *Vasco de Gama*, British steamer, Rice, 2,200, from Hongkong, November 25th, Mails and General, to P. M. S. S. Co.
 Dec. 4, *Nerada*, American steamer, Coy, 2,143, from Shanghai and ports, November 26th, Mails and General, to P. M. S. S. Co.

DEPARTURES.

Nov. 30, *Bellona*, German steamer, Schultz, 707, for Hakodate, Mails and General, despatched by P. M. S. S. Co.
 Dec. 1, *Marsilia*, British steamer, Bernard, 1,033, for Hongkong, Mails and General, despatched by P. & O. Co.
 Nov. 30, *Quidamack*, Russian corvette, Captain Taroff, 1,200, for —.
 Dec. 1, *Regalia*, British steamer, Harrison, 607, for Hiogo, General, despatched by Jardine, Matheson & Co.
 Dec. 4, *Dengaux*, British barque, Barlow, 450, for Shanghai, Coals, despatched by Wilkin & Robison.
 Dec. 4, *Golden Age*, American steamer, Wise, 1,370, for Shanghai and Ports, Mails and General, despatched by P. M. S. S. Co.

PASSENGERS.

Per French steamer *Volga*, from Hongkong — M. M. Maury, Mission, Rochi, Tomé, Bonnac, and Yamamoto.
 Per American steamer *Colorado*, for Hongkong.—Rev. J. B. Blakeley and wife, W. W. Toller, Lieut. Marx, H. A. Crane, Mrs Yoshida and servant, W. B. Sudmore, F. M. Neale, and 373 Chinese in the steerage.
 Per German steamer *Bellona* for Hakodate.—Mr H. N. Bellows, and Miss Mr. Fowler.
 Per British steamer *Marsilia* for Suez.—Messrs J. Von Blane, For Brinjisi.—W. Witheff, P. Palmieri, F. Calabresi. For Hongkong.—Mr H. Burton, wife and two children.
 Per *Glenearn*, from Shanghai : Mr. Litchfield.
 Per British steamer *Vasco de Gama*, from Hongkong — Messrs F. Knockmeyer, E. Steel, R. Wright, H. A. Allen and wife. For America.—Captain Freeman, Albert Nelson, Mrs Martford, Mr H. Whittle, Miss Whittle, and 260 in the steerage.
 Per American steamer *Nerada*, from Shanghai.—Miss Center, Messrs Korthals, Lavers, Gravenent, Van der Tak, De San, Jones Steele, Brunner Reimert, Escoube, Moses, Mr and Mrs Melderton, Mrs Sackson, Bishop Williams, and 6 Japanese ; in the steerage : 8 European, and 664 Japanese. For America.—Lieutenants H. R. Baker and J. B. House.
 Per American steamer *Golden Age*, for Hiogo and Shanghai.—Mr and Mrs Yauao and child, Mrs Arnoid, Miss Reed, Mrs J. H. Smith, Messrs Bryan, Clark, Farr, Mayeshima, Denon, Renard, Van der Slice, Hara, Chalwick, Spilling, Heimere, Caprani, and J. Bottomley.

CARGOES.

Per American steamer *Nerada*, from Shanghai.—
 Treasure \$215,000.

REPORTS.

The German steamer *Bellona* reports : experienced fresh south-westerly winds to Nagasaki, thence had fine weather to port.

The British barque *Pride of the Thames* reports : from Nagasaki to Van Dieman's Straits had southerly winds, and through the Straits strong S.W. blowing with heavy squalls ; from the Straits to Osima had variable winds and cloudy weather ; from Osima to Rock Island had strong N.W. gales with heavy sea, causing the head of of minimum to spring ; from Rock Island to port had light and variable winds.

The French steamer *Volga* reports : experienced strong winds from Hongkong to Van Dieman's Straits, thence fine weather to port.

The *Glenearn* reports fair weather during the passage from Shanghai.

The *Dengaux* on leaving the anchorage this morning, fouled the French mail steamer, and did some slight damage to the latter vessel.

VESSELS ON THE BERTH.

Destination.	Name.	Agents.	Despatch.
San Francisco	Vasco de Gama	P. M. S. S. Co.	6 instant
Hongkong	Tanais	M. M. Co.	8 instant
Hiogo	Dumbighshire	Van Oordt and C.	instant
New York, &c.	Monck	Augustine Head and Co.	instant
Kobe	Laurel	Wilkin & Robison	instant

MERCHANT SHIPPING IN PORT.

STEAMERS.			
Glenearn	Auld	...	...
Nanzing	Lamont	...	...
Naruto	DuBois	...	...
Nerada	Coy	...	...
Penedo	Cain	...	...
Tanais	Beynier	...	Hongkong
Vasco de Gama	Rice	...	San Francisco
Volga	Nomidedeu	...	Hongkong
Washi	Hescroft	...	...

SAILING SHIPS.

Denbighshire	483	Williams	Kobe
Glamorganshire	808	Richies	...
Sudan	304	Oesau	...
Harilah	408	Ower	...
Laurel	638	Davies	Kobe
Myrtle	35	Poley	...
Parmento	369	Abbot	...
Pride of the Thames	379	Brown	Nagasaki
Tartar	256	Kaemann	...

VESSELS OF WAR IN HARBOUR.

Austrian corvette	Friedrich	...	Baron Oesterreicher
British transport	Thalia	...	Captain Woolicomb
U. S. corvette	Lakawanna	...	Captain McCauley

VESSELS EXPECTED.

SAILED.

FOR CHINA PORTS, WITH GOODS FOR JAPAN.
 FROM GLASGOW VIA SHANGHAI.—"Ocean" str.

FOR JAPAN DIRECT.

FROM LONDON, FOR YOKOHAMA.—"F. C. Clarke."

FROM LONDON, FOR YOKOHAMA AND HIODO.—"Suffolk"; "Carnarvonshire"; "Penrith"; "Black Prince"; "Iyemo" str.; "Croesus" str.

FROM LIVERPOOL, FOR YOKOHAMA AND HIODO.—"Montego"; "Morn."

FROM MONTEVIDEO FOR YOKOHAMA.—"Ariola."

FROM GLASGOW.—

FROM SHIELDS.—"Ariantes."

FROM CARDIFF.—"Earl of Dufferin"; "Thomas Hilyard"; "James Paton."

FROM NEW YORK.—"Chas C. Lenry";

FROM SWANSEA.—"Caspar."

FROM HAMBURG.—"La Plata"; "Mathilde."

LOADING.

AT LIVERPOOL FOR CHINA PORTS.—"Sarpedon" str.; "Yarroe Bat" str.; "Menelaus" str.; "Ajax"

AT LONDON, FOR YOKOHAMA, HIODO &c.—"Calabar" str.; "Montgomeryshire."

AT LONDON, FOR YOKOHAMA AND HIODO.—"Evelyn"; "Walton,"

AT LONDON, FOR YOKOHAMA.—"Annie Braginton"

AT LONDON FOR HIODO.—"Gauch."

AT LIVERPOOL, FOR YOKOHAMA AND HIODO.—"Spirit of the Age."

AT LIVERPOOL, FOR YOKOHAMA.—

AT HAMBURG FOR YOKOHAMA AND HIODO.—

NEXT MAIL DUE FROM

	Per	Date
HONGKONG AND EUROPE.....	M. M. Str.	Dec. 13th
AMERICA.....	P. M. S. S.	Dec. 6th
HONGKONG AND EUROPE.....	P. & O. Str.	Dec. 5th
SHANGHAI, HIODO & NAGASAKI	P. M. S. S.	Dec. 11th
HAKODATE	P. M. S. S.	

NEXT MAIL LEAVES FOR

	Per	Date
HONGKONG.....	P. M. S. S.	
HONGKONG AND EUROPE.....	M. M. Str.	Dec. 8th
HONGKONG AND EUROPE.....	P. & O. Str.	Dec. 15th
SHANGHAI, HIODO & NAGASAKI	P. M. S. S.	Dec. 10th
AMERICA	P. M. S. S.	Dec. 6th

IMPERIAL GOVERNMENT RAILWAYS.

Trains leave Shimbashi (Yedo) at the following hours:—

A.M.	A.M.	A.M.	A.M.	NOON.
7.0	8.15	9.30	10.45	12.0
F.M.	P.M.	P.M.	P.M.	P.M.

Trains leave Yokohama at the following hours:—

A.M.	A.M.	A.M.	A.M.	NOON.
7.0	8.15	9.30	10.45	12.0
P.M.	P.M.	P.M.	P.M.	P.M.

1.15 2.30 3.45 5.0 6.15 7.30 10.0

CHURCH SERVICE.

English Church, 9 A.M. 11 A.M. 5.30 P.M.
 American, at No. 38, 11 ,
 French Church, 8.30 " 10 A.M.

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Yokohama, June 25, 1874. 12ms.

METEOROLOGICAL OBSERVATIONS.

LATITUDE. 35° 25' 41" North.

LONGITUDE. 139° 39' 0" East.

Day of Week.	Day of Month.	OBSERVATIONS TAKEN AT 9 A.M. LOCAL TIME.									
		Barometer.	Attached Thermometer.	Dry bulb.	Wet bulb.	Dew Point.	Elastic force of Vapour.	Humidity 0—1.	Direction.	Wind.	During past 24 hrs.
									Cloud. 0—10.		
Sat.	28	30.07	52.5 44.5	40.0	34.0 .196	.668	Calm.	.00	1	46.5	32.5 39.5 .00
Sun.	29	30.03	46.0 44.0	37.0	31.3 .175	.889	N.	.03	0	49.0	28.0 38.5 .00
Mon.	30	30.17	51.0 45.0	40.0	33.3 .190	.636	N. E.	1.25	3	44.0	34.0 39.0 .00
Tues.	1	30.23	49.5 39.5	34.5	27.0 .142	.588	N. W.	.44	5	44.0	30.0 37.0 .00
Wed.	2	30.27	49.5 41.0	37.0	31.2 .174	.678	N.	.20	3	44.0	29.0 36.5 .00
Thurs.	3	29.34	52.5 48.5	46.5	44.6 .294	.863	N. W.	.44	10	48.5	37.5 43.0 1.22
Fri.	4	29.69	42.5 46.0	40.0	31.9 .180	.580	N. N. W.	.20	1	47.5	38.0 42.7 1.44
Mean		29.77	49.0 43.0	39.2	33.3 .19	.700		.36	3	46.2	32.7 39.4 .38

SUMMARISED OBSERVATIONS FOR NOVEMBER.

From observations at 9 A.M. daily, on the Bluff (100 feet above sea level), the mean reading of the barometer last month was 30.02 inches; the highest reading was 30.35 inches on the 1st; and the lowest 29.65 inches on the 18th instant.

The mean temperature of the air was 44.7 degrees.

The highest day temperature in the shade was 62.5 degrees on the 25th, and the lowest night temperature was 28.0 degrees on the 29th instant. The extreme range, therefore, was 34.5 deg.

The difference between the mean dew point, and the air temperature was 3.0 degrees.

The mean degree of humidity of the air was .758; complete saturation being represented by 1.

The general direction of the wind was Northerly.

Rain fell during the month to the amount of 2.61 inches.

There were 21 days on which no rain fell; the maximum fall in one day was .60 inches registered on the morning of the 6th inst.

A slight earthquake was felt on the morning of the 22nd instant about 8.15 o'clock.

J. H. SANDWITH, —Lieut.,
 R. M. L. I.

CAMP, Yokohama, December 5th, 1874.

COMMERCIAL INTELLIGENCE.

YOKOHAMA, DECEMBER 5TH, 1874.

The prevailing tranquillity of business is attributable partly to the shock which credit has received by the failure of the Ohno bank (the second of importance in the Empire) and partly to the fact that the proceeds of the harvest are as yet unrealised. Business has also suffered temporarily by the holidays which celebrated the return of Okubo the special Envoy to China, but there is fair reason to believe that we may hope for a resumption of activity shortly, inasmuch as stocks in native hands are known to be moderate and the result of the food harvests on the whole good.

Cotton Fabrics.—Business has been on a wholly nominal scale from the causes assigned in the preceding paragraph, and demands no further comment. The dulness is stated to be almost without precedent.

Cotton Yarns.—Have been in strong demand during the closing fortnight for Nos. 1 & 2 and sales have been made at enhanced rates. Stocks are, however, reported to be small except in No. 3.

Woollen Manufactures.—These have shared in the general dulness and the market is reported to be utterly stagnant. The intelligence from Ozaka, a large consuming dépôt, is discouraging and nominal prices only can be named.

Iron and Metals.—The market is decidedly weaker, the heavy shipments arriving from China, and the falling tendency of markets there, having seriously affected quotations which we place on a lower range than by our last.

Sugar.—The high rates prevailing a few weeks since having invited heavy shipments hither the market is sensibly weaker and closes with a lower tendency.

Kerosine Oil is quotable at the undermentioned rates, but the market is entirely bare of stocks in first hands.

QUOTATIONS FOR ARTICLES OF IMPORT.

GOODS.	PRICES.	GOODS.	PRICES.
Cotton Piece Goods.			
Grey Shirtings:—			
7 lbs. 38½ yds. 39 in. per pce.	\$1.95 to \$2.15	Plain Mousseline de Laine... 30 yds. 30 in.	0.19 to 0.20½
8 " " 38½ " 44 in. "		Figured do. 30 yds. 30 in.	0.28 to 0.38
8 lbs. 4 to 8 lbs. 6 ditto 39 in. "	3.35 to 3.60	Multicolored do. 30 yds. 30 in.	0.30 to 0.40
9 lbs. " " 44 in. "	3.87 to 3.00	Cloth, all wool plain or fancy, 48 in. to 58 in.	1.00 to 1.10
White Shirtings:—		Presidents... " 54 in. to 56 in.	0.90 to 1.02½
58 to 60 reed 40 yds. 35 in. nominal "	2.50 to 2.60	Pilots... " 54 in. to 56 in.	0.55 to 0.68
64 to 72 " ditto... " "	2.70 to 2.85	Union... " 54 in. to 56 in.	0.70 to 0.95
T. Cloth:—6 lbs. " " "	1.50 to 1.65	Blankets, scarlet & green 7 to 8 lbs. per lb.	0.65 to 0.50
7 " " " "	1.80 to 1.90		
Drills, English—15 lbs. " " "	3.20 to 3.40		
Handkerchiefs Assorted " " per doz.	0.45 to 0.80		
Broades & Spots (White) " " per pce.	nominal.		
ditto (Dyed) " " "			
Turkey Reds 25 yds. 30 in. 2—3 lb. per lb.	0.87 to 1.00		
Velvets (Black) " " "	9.00 to 9.75		
Victoria Lawns 12 yds. 42 in. " " per pce.	0.90 to 1.00		
Taffschelwee single weft 12 yds. 43 in. "	2.75 to 2.90		
ditto (double weft) " " "			
Cotton Yarns.			
No. 16 to 24 " " " " per picul.	\$34.00 to 38.00		
Reverse " " " " "	nominal.		
" 28 to 32 " " " " "	39.00 to 43.00		
" 38 to 43 " " small stock. "	42.00 to 48.00		
Weollens & Woollen Mixtures.			
Plain Orleans " 40—42 yds. 38 in.	5.90 to 8.10	Swatow... " " " " "	8.60 to 3.75
Figured Orleans " 29—30 yds. 31 in.	4.50 to 5.50	Daitoong... " " " " "	3.75 to 4.00
Italian Cloth " 30 yds. 32 in.	0.25 to 0.36	Sugar Candy... " " " " "	10.00 to 11.00
Camlet Cords " 29—30 yds. 32 in.	6.25 to 7.40	Raw Cotton (Shanghai new) " " "	14.00 to 14.25
Camlets Assd. " 56—58 yds. 31 in.	18.50 to 19.00	Rice Japan... " " " " "	3.15
Lastings Japan " 29—30 yds. 32 in.	14.00 to 16.00	Kerosene... " " " " per case.	3.60 to 3.65

COMMERCIAL INTELLIGENCE.

EXPORTS.

Silk.—The advices received from the home markets continue to be very discouraging, the falling off in the value of "Japan's" being attributed to their unsatisfactory quality no less than to an overwhelming competition on the part of Italian silks.

Since the 23rd instant transactions on this side have been limited to 300 bales, and prices have further receded \$10 to \$20 according to quality.

The stock has increased to 1,300 bales.

Silk-worms' Eggs.—Total settlements are estimated at 1,300,000 cards, and the last shipments of the season have been made via San Francisco. A return of the total export, based on the most reliable data, will be published in our next.

Tea.—Business has been greatly checked by continued telegraphic advices from the American centres of trade, giving sales and valuations at figures which must be most unsatisfactory to shippers of a great bulk of this season's operations. "Medium" classes seem by latest dates to average only 40 cents gold, and "Good Medium," 42 to 43 cents. These figures exhibit a severe loss.

Operations since the date of last mail issue amount to some 2,500 piculs, at very irregular prices; "Medium" and lower grades show a reduction of from \$2 to \$4 per picul; "Good Mediums" are weak without quotable change, but "Fine" and "Finest" grades are firm.

Stocks in first hands are large, comprising about 15,000 piculs merchantable tea, and on the whole this present season's crop has largely exceeded even the most liberal estimates. It seems certain now that the total export from all Japan for the season 1874-75 will equal twenty-two million pounds, and should the natives this year push forward the stocks they have some years carried over into the next season we may see the above estimate exceeded by even two million pounds additional.

EXPORTS.

GOODS.	PRICES.	LAID DOWN AND SOLD IN LONDON. £x. £m./a. at 4s. 2d.	LAID DOWN AND SOLD IN LIVERPOOL. £x. £m./a. at 5s. 3d. @ 6 m/s.
Silk:			
HANKS.	Extra nominal	\$600.00 per picul	frs. 63
" Best No. 1 to 9	nominal	\$550.00 to \$570.00 "	frs. 58 to frs. 60
Good No 2	nominal	\$520.00 to \$540.00 "	frs. 55 to frs. 57
Medium No. 2½	nominal	\$480.00 to \$500.00 "	frs. 51 to frs. 53
" Common No. 3	nominal	\$450.00 to \$470.00 "	frs. 48 to frs. 50
" Inferior	nominal		
OSENBU	Extra		
" Best No. 1	nominal	\$580.00 to \$560.00 "	frs. 56 to frs. 59
" Good	nominal	\$490.00 to \$520.00 "	frs. 52 to frs. 55
" Medium	nominal	\$450.00 to \$480.00 "	frs. 48 to frs. 51
" Inferior	nominal		
KAKEDA	Best		
Good	nominal		
HAMATSUKI	nominal	\$400.00 to \$430.00 "	frs. 48 to frs. 46
SODAI	Medium	nominal	
ETCHESEN	Best	nominal	
Tea:			
Common	nominal	\$28.00 to 27.60 "	
Good Common	nominal	\$28.00 to 31.00 "	
Medium	nominal	\$33.00 to 36.00 "	
Good Medium	nominal	\$38.00 to 41.00 "	
Fine	nominal	\$42.00 to 46.00 "	
Finest	nominal	\$48.00 to 51.00 "	
Choice	nominal	\$52.00 upwards.	
Choicest	nominal	None	
Sundries:			
Mushrooms	nominal	\$53.00 to 59.00 "	
Icinglass	nominal	\$25.00 to 48.00 "	
Sharks' Fin	nominal	\$28.00 to 48.00 "	
White Wax	nominal	\$18.00 to 14.00 "	
Bees' Do.	nominal	\$14.00 to 47.00 "	
Cuttle fish	nominal	\$11.00 to 22.00 "	
Seaweed	nominal	\$1.60 to 2.80 "	
Gallnuts	nominal	\$10.50 to 11.50 "	
Tobacco	nominal	\$8.00 to 9.50 "	
Sulphur	nominal	\$2.50 to 8.25 "	
Wheat	nominal	\$1.20 to 1.60 "	
Shellfish	nominal	\$13.00 to 42.00 "	
Camphor	nominal	\$14.00 to 16.00 "	
Béche de Mer	nominal	\$19.00 to 55.00 "	
Ginseng, 50 to 100 pieces	nominal	\$3.40 to 5.50 "	
100 to 200 "	nominal	\$2.10 to 3.20 "	
Copper	nominal	\$16.00 to 23.50 "	

EXCHANGE AND BULLION.

Exchange.—Early in the week Sterling rates suffered a sudden drop from which they have not recovered.

GOLD YEN.—Have again been exported largely, and are in consequence firmer.

Rates close as follows:—

On London, Bank, 6 Months'	4s. 2½d.
" Sight	4s. 1½d.
" Private, 6 months	4s. 2½d.
" Paris, Bank Bills 6 months	5.27
" Private	5.33
" Shanghai Bank Bills on demand	72½
" " Private Bills 10 days sight	73

On Hongkong Bank Bills on demand Par.

Private Bills 10 ds. sight	½ per cent discount.
" San Francisco Bank Bills on demand	101
30 days' sight Private	103
" New York Bank Bills on demand	101
30d. a. Private	103
Gold Yen	411½
Kinsatz	415

NEW ADVERTISEMENTS.

GAIETY THEATRE.

THE FIRST

Amateur Performance

Of the Season will be given

On Wednesday Evening,

The 16th Instant,

When will be presented Planché's Comedy,

"NOT A BAD JUDGE,"

AND

"Retained for the Defence."

Full particulars will be duly announced.

Yokohama, December 5, 1874.

w. & d.

Hongkong & Shanghai Banking Corporation.

Paid-up Capital.....	5,000,000 Dollars.
Reserve Fund	1,000,000 Dollars.

COURT OF DIRECTORS.

Chairman—W. H. FORBES, Esq.

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BRANCHES AND AGENCIES.

HONGKONG.	FOOCHOW.
SHANGHAI.	HANKOW.
YOKOHAMA.	HIOGO.
BOMBAY.	AMOY.
CALCUTTA.	SAIGON.

YOKOHAMA BRANCH.

INTEREST ALLOWED

ON Current Deposit Accounts at the rate of 2 per cent. per Annum on the daily balance.

ON FIXED DEPOSITS:—

For 3 Months.....	3 per cent per Annum.
" 6 "	4 per cent. " "
" 12 "	5 per cent. " "

Local Bills Discounted.

CREDITS granted on approved Securities, and every description of Banking and Exchange Business transacted.

DRAFTS granted on London, and the Chief Commercial places in Europe, India, Australia, America, China and Japan.

HERBERT COPE,
Acting Manager.

Yokohama, May 1, 1874.

MISCELLANEOUS.

HARRISON & SONS,

EXPORT & GENERAL STATIONERS.

ACCOUNT BOOK MANUFACTURERS,
DIE SINKERS,
SEAL ENGRAVERS,
RELIEF STAMPERS AND ILLUMINATORS,
LETTER PRESS, LITHOGRAPHIC AND COPPERPLATE
PRINTERS.
BOOKSELLERS AND PUBLISHERS,
BY SPECIAL APPOINTMENT TO H. M. THE QUEEN,
H. R. H. THE PRINCE OF WALES,
THE ROYAL FAMILY,
AND HER MAJESTY'S GOVERNMENT OFFICES.

An Illustrated Catalogue, with Samples of
Paper, Specimens of Stamping, &c.,
Sent on Application.

HARRISON & SONS,

59, Pall Mall & 1, St. James' Street,

Printing	45 & 46, St. Martin's Lane, Charing Cross,
Offices	15 & 16, Gt. May's Buildings, London.

Yokohama, May 10, 1874.

26ms.

FRAUD.

On the 27th June, 1866, MOTREWALLAH, a Printer, was convicted at the Supreme Court, Calcutta, of counterfeiting the

LABELS

Of Messrs. CROSSE & BLACKWELL,

London, and was sentenced by Mr. Justice Phear to

TWO YEARS RIGOROUS IMPRISONMENT.

And on the 30th of the same month, for

SELLING SPURIOUS ARTICLES

bearing Labels in imitation of Messrs. CROSSE & BLACKWELL'S
SHAKE BACHOO was sentenced, by the Suburban Magistrate at
Sealdah, to

TWO YEARS RIGOROUS IMPRISONMENT.

CAUTION.—Any one selling spurious oilmen's stores, under Crosse & Blackwell's name, will be liable to the same punishment, and will be vigorously prosecuted. Purchasers are recommended to examine all goods carefully upon taking delivery of them, and to destroy all bottles and jars when emptied. The GENUINE Manufactures, the corks of which are all branded with Crosse & Blackwell's name, may be had from EVERY RESPECTABLE DEALER in India.

Yokohama, May 27, 1872.

12ms.

THE FOLLOWING

IS AN

EXTRACT FROM A LETTER

dated 15th May, 1872, from an old inhabitant of
Horningham, near Warminster, Wilts.—

"I must also beg to say that your Pills are an excellent medicine for me, and I certainly do enjoy good health, sound sleep and a good appetite; this is owing to taking your Pills. I am 78 years old.

" Remaining, Gentlemen, yours very respectfully,
To the Proprietors of

L. S.

NORTON'S CAMOMILE PILLS, London.

Aug. 1. 26ms.

MISCELLANEOUS.

KEATING'S COUGH LOZENGES.

THIS UNIVERSAL REMEDY now stands the first in public favour and confidence; this result has been acquired by the test of 50 YEARS' EXPERIENCE. These Lozenges may be found on sale in every British Colony, and throughout India and China they have been highly esteemed wherever introduced; For COUGHS, ASTHMA, and all affections of the Throat and Chest, they are the most agreeable and efficacious remedy. They do not contain opium or any other deleterious drug, and may therefore be taken with perfect safety by the most delicate constitution.

Sold in Bottles of various sizes.

KEATING'S BON BONS OR WORM TABLETS

A PURELY VEGETABLE SWEETMEAT, both in appearance and taste, furnishing a most agreeable method of administering the only certain remedy for INTESTINAL OR THREAD WORMS. It is a perfectly safe and mild preparation, and is especially adapted for children. Sold in Tins and Bottles by all Chemists.

CAUTION.—The public are requested to observe that all the above preparation bear the Trade Mark as herein shown.
THOMAS KEATING, LONDON, EXPORT CHEMIST AND DRUGGIST. Indents for pure Drugs and Chemicals carefully executed.

TRADE MARK.



Aug. 1. 26ins.

THE GREATEST WONDER OF MODERN TIMES!
HOLLOWAY'S PILLS.

THESE famous and unrivalled Pills act most powerfully, yet soothingly on the liver and stomach, giving tone, energy, and vigour to these great main springs of life. Females of all ages will find them in all cases to be depended upon. Persons suffering from weak or debilitated constitutions will discover that by the use of this wonderful medicine there is "Health for all." Blood is the fountain of life, and its purity can be maintained by the use of these Pills.

Sir Samuel Baker, in his work entitled "The Nile Tributaries in Abyssinia," speaks of the Pills in the highest terms.

Mr. J. T. Cooper, in his famous "Travels in China," says that when money could not procure for him his necessary requirements, he could always get his wants supplied in exchange for "Holloway's Pills."

THE GREAT CURE ALL!
HOLLOWAY'S OINTMENT.

Is a certain remedy for bad legs, bad breasts, and ulcerations of a kind. It acts miraculously in healing ulcerations, curing skin diseases and in arresting and subduing all inflammations. Rubbed on the neck and chest, it exerts the most beneficial influence over asthma, shortness of breath, sore throats, bronchitis, diphtheria, coughs, and colds. In the cure of gout, rheumatism, glandular swellings, and stiff joints, it has no equal. In disorders of the kidneys the Ointment should be most effectually rubbed over the seat of those organs.

THE "MOFUSSIL GUARDIAN,"

Of August 31st, 1872, states that a severe case of that dreadful plague "dengue" was cured in a few hours, by well rubbing the body with Holloway's Ointment.

These remedies are only prepared by the Proprietor, THOMAS HOLLOWAY, 533, Oxford Street, London. Beware of counterfeits that may emanate from the United States.

Yokohama, September 27, 1873.

52 ins.

JAMES WHITFIELD,
CLARINGTON BROOK FORGE AND IRON FOUNDRY,

WIGAN, LANCASHIRE, ENGLAND,

Maker of the celebrated Spades, Shovels, Forks, Miners' Tools, Cart Arms, Bushes; also Small Engines, Mortar Mills, Iron Castings for Collieries, GAS AND IRON WORKS, &c., &c. Dealer in Files, Saws, Steel, Builders' and Mechanics' Tools, Safety Lamps, Hoisting Blocks, Jacks, Anvils, Vices, Bellows, Screws, Bolts, Washers, Rivets, Nails, Safes, Locks, Hinges, and all Ironmongery Goods of best quality as used for home consumption.

Aug. 20, 4ins.

CAUTION.—Merchandise Marks Act.—The celebrated YORKSHIRE RELISH.—Messrs. GOODALL, RACKHOUSE & Co., of Leeds, England, the proprietors of the above-named sauce, having successfully prosecuted certain persons before Alderman Sir R. Carden, at the Mansion-house, London, on the 6th June, 1871, for having fraudulently counterfeited their trade mark and label, hereby give notice that they will prosecute all persons pirating their said label and trade mark or infringing their rights in respect to the same.—J. SEYMOUR SALAMAN, Solicitor to the Trade Mark Protection Society, 12, King-street, Cheapside.

Sept. 5, 4ins.

MISCELLANEOUS.

ENGLISH GOODS

(*Via SUEZ CANAL*)

AT CHEAPEST RATES.

D. NICHOLSON & CO.
SILK, WOOLLEN, AND

MANCHESTER WAREHOUSEMEN,
India, Colonial, and Foreign Outfitters,
50 TO 52, ST. PAUL'S CHURCHYARD,

(Corner of Cheapside,) London,

ESTABLISHED 1843.

Invite attention to their Illustrated 120 page Catalogue and outfitting List 60 pages, sent post free, containing full particulars as to WOOLLEN, SILK, AND COTTON GOODS
Of every description.

PATTERNS FREE.

Ladies' Clothing, Linen, Hosiery, Gloves, Ribbons, Haberdashery, Jewellery, &c.

Contractors for Military and Police Clothing and Accoutrements, Household Furniture, Musical Instruments, Ironmongery, Fire-arms, Agricultural Implements, Cutlery, Carriages, Saddlery and Harness, Shipped at Lowest Export Prices.

Sole Agents for the "Wanzer" and the "Gresham" Sewing Machines, for the City of London.

Foreign Produce disposed of for a Commission of 2½ per cent. Price Lists can be had of Messrs. Wheatley & Co., Bombay, and at the Office of the "Englishman" Newspaper, Calcutta.

Terms—Not less than 25 per cent. to accompany indents, and balances drawn for at 60 days' sight.

Parcels not exceeding fifty pounds in weight and 2 feet by 1 foot in size, and £20 in value, are conveyed from London to any post town in India, at a uniform charge of 1s. 4d. per lb.

Special Advantages to Hotel Keepers and Regimental Messes.

D. NICHOLSON & CO.,
50, 51 and 52, ST. PAUL'S CHURCHYARD,
LONDON.

October 8, 1874. 52ins.

GEORGE FLETCHER & CO.,
BETTS STREET, ST. GEORGE'S EAST, LONDON,

AND

MASSON WORKS, DERBY.

Established over Thirty years as MAKERS OF EVERY DESCRIPTION OF MACHINERY FOR SUGAR PLANTATIONS AND REFINERIES, and well known all over the world. Also the ORIGINAL PATENTEEs of the MULTITUBULAR BOILERS FOR THE COPPER WALL.

Multitubular and other Steam Boilers. Condensing and High Pressure Steam Engines. Donkey Engines. Distillery Engines. Air-pump Engines. Wrought Iron Waterwheels. Horizontal and Vertical Sugar Mills of every description, with suitable gearing. Cane-juice Pumps. Tubular and other steam Clarifiers. Sugar Pans, Coolers, &c. Granulating Pans of every description. Also small Plants (clarifiers and Sugar Boilers extra) to make 2½ tons per day of 12 hours, for £770.

Yokohama, March 21, 1874. tf.

BETTS'S CAPSULE PATEZTS.

To prevent infringements, notice is hereby given, that Betts's Name is on every Capsule he makes for the principal merchants in England and France, thus enabling vendor, purchaser, and consumer, not only to identify the genuineness of the Capsule, but likewise the contents of the vessel to which it is applied. The LORD CHANCELLOR, in his judgment, said that the capsules are not used merely for the purpose of ornament, but that they are serviceable in protecting the wine from injury, and insuring its genuineness.

Manufactories:—1, Wharf-road, City-road, London, and Bordeaux, France.
Yokohama, 6th July, 1872. 12m.